National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

NOTICE

The quality of this microform is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Reproduction in full or in part of this microform is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30, and subsequent amendments.

AVIS

La qualité de cette microforme dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

La reproduction, même partielle, de cette microforme est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30, et ses amendements subséquents.

NL-339 (r. 88/04) c

Canada

UNIVERSITY OF ALBERTA

STRESS, SUPPORTS, AND COPING WITH MENTALLY HANDICAPPED PRESCHOOLERS: MOTHER AND FATHER DIFFERENCES

BY

PAUL SIEBERT

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

IN

SPECIAL EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

EDMONTON, ALBERTA

FALL, 1990

National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Service des thèses canadiennes

Ottawa, Canada
K1A 0N4

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-315-64783-3

Canada

UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR: PAUL FRANK SIEBERT

TITLE OF THESIS: STRESS, SUPPORTS, AND COPING WITH MENTALLY HANDICAPPED PRESCHOOLERS: MOTHER AND FATHER DIFFERENCES

DEGREE: MASTER OF EDUCATION

YEAR THIS DEGREE GRANTED: 1990

PERMISSION IS HEREBY GRANTED TO THE UNIVERSITY OF ALBERTA LIBRARY TO REPRODUCE SINGLE COPIES OF THIS THESIS AND TO LEND OR SELL SUCH COPIES FOR PRIVATE, SCHOLARLY OR SCIENTIFIC RESEARCH PURPOSES ONLY.

THE AUTHOR RESERVES OTHER PUBLICATION RIGHTS, AND NEITHER THE THESIS NOR EXTENSIVE EXTRACTS FROM IT MAY BE PRINTED OR OTHERWISE REPRODUCED WITHOUT THE AUTHOR'S WRITTEN PERMISSION.

P. Siebert

106-1599 Lassiter Terrace,
Gloucester, Ontario, Canada,
K1J 8R6.

Date: May 22, 1990

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

THE UNDERSIGNED CERTIFY THEY HAVE READ, AND RECOMMEND TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH FOR ACCEPTANCE, A THESIS ENTITLED STRESS, SUPPORTS, AND COPING WITH MENTALLY HANDICAPPED PRESCHOOLERS: MOTHER AND FATHER DIFFERENCES SUBMITTED BY PAUL F. SIEBERT IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN SEVERE DISABILITIES.

L. McDonald
Supervisor

D. Baine

G. Holdgrafer

D. Sobsey

Date May 3/90

Abstract

The purpose of this study was to identify differences between mothers and fathers of preschool aged mentally handicapped children in terms of stress, coping strategies, and social supports. This information was intended to assist those charged with planning child and family support systems to develop programs which meet the unique needs of different family members.

Parents were contacted through the various preschool programs functioning in the city of Edmonton, Alberta. The parents were asked to complete three questionnaires, including the Parenting Stress Index (Abidin, 1986), which measures sources and amounts of stress; the Coping Health Inventory for Parents (McCubbin, McCubbin, Nevin, & Cauble, 1983), which measures coping strategies and patterns; and the Social Support Inventory (McCubbin, Patterson, Rossman, & Cooke, 1982), which measures sources and satisfaction with a variety of common social supports. Sixteen two parent families volunteered to participate in the research study.

The data showed that some important differences existed between the mothers and fathers. Mothers and fathers were generally in agreement about the stress directly related to their child's characteristics. They differed in terms of the stress associated with their roles as parents. Mothers reported greater stress than fathers did related to role restrictions and stress symptoms. Fathers of boys did not report significantly more stress than fathers of girls.

Mothers, more than fathers, tended to utilize a pattern of coping related to understanding the medical situation through communication with medical personnel and other parents. Both parents named their spouses as their most important social support. Professionals, community groups, and churches/synagogues were not reported to be significant sources of social support. However, mothers reported that they received more support from close friends and professionals than fathers did, and fathers reported more support from coworkers than mothers did.

The findings of this study were consistent with previous research in the field of family coping and stress. Recommendations were made for (a) increasing the individualization of family services, (b) the inclusion of coping measures in family stress studies, (c) the need to teach parents to use their social support networks, and (d) the provision of respite services.

ACKNOWLEDGEMENTS

I would like to thank my thesis advisor, Dr. Linda McDonald, for four years of encouragement and availability to complete this project. The support and expertise of my academic advisor, Dr. David Baine, have also been greatly appreciated. Thanks also to Dr. Gary Holdgrafer and Dr. Dick Sobsey for their participation and interest as members of my committee.

I would like to thank the members of the original Family Stress and Coping Project, including Dr. Linda McDonald, Dr. Gerard Kysela, Jan Reddon, and the various research assistants for their part in the research process. Thanks also to the families who responded to the questionnaires. The information they provided made this project possible.

My most special thanks go to my wife, Moira, for her constant encouragement, helpful advice, and for doing my share of the housework and babysitting on many occasions so that I could complete this project. Finally, thanks to my parents, siblings, in-laws, and the many friends who expressed interest and support throughout the long haul.

TABLE OF CONTENTS

CHAPTER I - INTRODUCTION

PERSONAL INTRODUCTION AND REFLECTION..... 1

INTRODUCTION TO THE PRESENT RESEARCH..... 4

CHAPTER II - LITERATURE REVIEW

INTRODUCTION..... 6

FAMILY STRESS, SOCIAL SUPPORTS AND COPING..... 6
INTRODUCTION..... 6
RESEARCH ON FAMILY STRESS..... 7
RESEARCH ON FAMILY COPING..... 10
RESEARCH ON FAMILY SOCIAL SUPPORTS..... 11
A MODEL FOR RELATING STRESS, SOCIAL SUPPORTS AND COPING..... 13
THE NEED FOR A SYSTEMS APPROACH..... 18

DIFFERENCES IN COPING, SOCIAL SUPPORTS, AND STRESS FOR MOTHERS AND FATHERS OF MENTALLY HANDICAPPED CHILDREN..... 22
INTRODUCTION..... 22
STUDIES OF MOTHERS OF HANDICAPPED CHILDREN... 23
STUDIES COMPARING MOTHERS OF HANDICAPPED AND NON-HANDICAPPED CHILDREN..... 27
STUDIES OF FATHERS OF HANDICAPPED CHILDREN... 29
STUDIES COMPARING FATHERS OF HANDICAPPED AND NON-HANDICAPPED CHILDREN..... 30
STUDIES WHICH COMPARED MOTHERS AND FATHERS OF HANDICAPPED CHILDREN..... 32
STUDIES OF MOTHERS AND FATHERS OF HANDICAPPED CHILDREN COMPARED WITH MOTHERS AND FATHERS OF NON-HANDICAPPED CHILDREN..... 38
SUMMARIZING THE DIFFERENCES IN COPING, SUPPORTS AND STRESS FOR MOTHERS AND FATHERS OF MENTALLY HANDICAPPED CHILDREN..... 39

A GENERAL RATIONALE FOR STUDYING THE DIFFERENCES IN STRESS, SUPPORTS, AND COPING BETWEEN MOTHERS AND FATHERS OF MENTALLY HANDICAPPED CHILDREN..... 42

CHAPTER III - STATEMENT OF THE PROBLEM

INTRODUCTION..... 45

FIRST HYPOTHESIS: MOTHERS AND FATHERS AND STRESS..... 45
PREMISES..... 45
STATEMENT OF THE FIRST HYPOTHESIS..... 46
STATEMENT OF THE FIRST NULL HYPOTHESIS..... 46
EXPLANATION..... 47

SECOND HYPOTHESIS: MOTHERS AND FATHERS AND SOCIAL SUPPORTS AND COPING..... 48
PREMISES..... 48
STATEMENT OF THE SECOND HYPOTHESIS..... 49
STATEMENT OF THE SECOND NULL HYPOTHESIS..... 50
EXPLANATION..... 50

IMPLICATIONS..... 51

CHAPTER IV - METHOD

INTRODUCTION..... 52

GENERAL PROCEDURE..... 52

ETHICAL CONSIDERATIONS..... 53

SUBJECTS..... 54
PARENTS..... 54
CHILDREN..... 54

MEASURES..... 55
MENTAL AGE OF THE CHILDREN..... 55
THE PARENTING STRESS INDEX..... 59
THE COPING HEALTH INVENTORY FOR PARENTS..... 69
THE SOCIAL SUPPORT INVENTORY..... 74

DATA ANALYSIS..... 78
FIRST HYPOTHESIS..... 78
SECOND HYPOTHESIS..... 79
CORRELATIONS..... 79

CHAPTER V - RESULTS

INTRODUCTION..... 80

DESCRIPTION OF THE SAMPLE..... 80
PARENTS..... 80
CHILDREN..... 81

THE FIRST HYPOTHESIS..... 82
INTRODUCTION..... 82
COMPARISONS OF MOTHERS' AND FATHERS' REPORTED STRESS..... 82
STRESS FOR THE FATHERS OF BOYS..... 86

THE SECOND HYPOTHESIS..... 88
INTRODUCTION..... 88
COMPARISONS OF MOTHERS' AND FATHERS' COPING.. 89
COMPARISONS OF MOTHERS' AND FATHERS' SOCIAL SUPPORTS..... 92
SUMMARIZING THE SECOND HYPOTHESIS..... 94

CORRELATIONS OF VARIABLES..... 95
INTRODUCTION..... 95
CORRELATIONS FOR FATHERS..... 96
CORRELATIONS FOR MOTHERS..... 96
SUMMARY..... 97

CHAPTER SUMMARY..... 97

CHAPTER VI - DISCUSSION

INTRODUCTION.....101

RESEARCH LIMITATIONS.....101

RESEARCH DESIGN.....104
SUBJECTS.....104
QUESTIONNAIRES.....105

DISCUSSION OF THE RESULTS.....106
HYPOTHESIS ONE.....106
HYPOTHESIS TWO.....111
CORRELATIONS.....116

RESEARCH CONCLUSIONS.....118

RECOMMENDATIONS FOR PRACTITIONERS.....120

RECOMMENDATIONS FOR FUTURE RESEARCH.....125

THESIS CONCLUSION.....127

TABLES 1 - 8.....128

REFERENCES.....138

APPENDIX.....149

LIST OF TABLES

TABLE 1 - RELIABILITY OF THE PARENTING STRESS INDEX....128

TABLE 2 - DEMOGRAPHIC INFORMATION FOR PARTICIPANT PARENTS.....129

TABLE 3 - CHARACTERISTICS OF THE SAMPLE CHILDREN.....130

TABLE 4 - PARENTING STRESS INDEX SCORES FOR TEST AND NORM GROUPS.....131

TABLE 5 - PARENTING STRESS INDEX SCORES FOR FATHERS....133

TABLE 6 - COPING HEALTH INVENTORY SCORES FOR TEST AND NORM GROUPS.....134

TABLE 7 - SOCIAL SUPPORT INVENTORY SCORES FOR TEST AND NORM GROUPS.....135

TABLE 8 - CORRELATIONS OF QUESTIONNAIRES.....137

Chapter I

Introduction

Personal Introduction and Reflection

"Yours must be a very special family" is a statement I often heard as I grew up with my sister who has Down Syndrome. "It takes a special person to do your job--you must be very patient" is a statement I often hear when I describe my teaching job with multiply handicapped children. I accept these statements with at least some degree of ambivalence. Even though our family life and my teaching career are not always easy or perfect, I do not want to be viewed as a saint or martyr. I love my sister and appreciate her for who she is. I enjoy my work and I get paid for it. Nevertheless, I know families who have been overwhelmed by the difficulties associated with their handicapped children. These families experience a great deal of stress.

Why my family had a generally positive experience and was able to manage difficulties might be explained in the following ways. From the beginning, my parents' spiritual faith and close church community provided both meaning and acceptance for my sister and for our family. My sister's genial personality, aside from her disabilities, may have made it easier for my parents to cope. It might also be true that a child with Down Syndrome is an easier "burden" than a child with autism

or multiple disabilities. Finally, my parents' careers as nurse and educator probably afforded them access to the best of health care and education for my sister. They could feel comfortable that she was healthy and receiving the best training possible at the time. With this background, I began a teaching career with mentally handicapped children. In my teaching, I experience an optimism that the children I work with can learn and that there are methods and technology available to help me carry out my job. The sense of hopelessness which many people experience when seeing my students for the first time is not a feeling I share. I often wonder what factors in the experiences of other families allow them, with more or less success, to meet the difficulties posed by their handicapped child.

It is not difficult to create a list of factors which might make life more problematic for families with a handicapped child. Looking in from the outside, professionals have attempted to catalogue and interpret parental reactions to their handicapped children. For example, Tynan and Fritsch (1987), citing a presentation by Smith (1984), created a long list of possible sources of difficulty or stress for families. The list reflects the experiences and interpretations of professionals and should not be construed as normative for all parents of handicapped children. Sources of stress or difficulty might include:

dream of child shattered;
child looks different;
more attention required;
routine caregiving is more difficult;
attitudes towards handicapped;
exposed to frustration and humiliations;
lowered self-esteem;
less time for siblings;
spouses have less time together;
friends uncomfortable/drift away;
avoid situations/social events;
fewer rewards for being a parent;
separations/disruptions of parent-child relationship;
reactions of relatives/family;
lack of specific information;
increased costs for medical, special equipment, and trips;
conflict in opinions;
parents' expectations often inappropriate;
break in communication/relationship with child;
unknown questions regarding future; and
vulnerable child (Tynan & Fritsch, 1987, p. 4)

Although this list needs more explanation than is presented here, it does give some idea about what a family with a handicapped child might have to face.

As a professional now working in the field of educational services for children with multiple handicaps, I have given much thought to both the difficulties families face and how it is that some families cope better than others. It has always been of interest to me that I deal almost exclusively with mothers when I speak to "families" or invite "families" to my classroom. I am very uncertain about who the fathers of my students are and about their aspirations for their children. Are their concerns exactly the same as their wives' concerns? Do they experience some of these suspected difficulties in the same ways as their wives? Do fathers have different ways of dealing with their problems than mothers? With these questions in mind, the research project described in the following chapters was initiated.

Introduction to the Present Research

The research project which grew out of the thinking described in the personal reflection (above) will be presented and organized into the five following chapters.

The Literature Review chapter traces some of the history of family stress, social supports, and coping research. Definitions of these terms and other related ideas are offered. Research which has studied both fathers and mothers is highlighted. Finally, a general

rationale for carrying out the present research is offered.

Leading naturally from the Literature Review is the chapter describing the Statement of the Problem. In this chapter, previous research is briefly summarized and two hypotheses and their corresponding null hypotheses are listed with explanations. This chapter concludes with a discussion of the implications of the research.

Following the Statement of the Problem, the Method chapter provides a description of how the present research was carried out. The sample parents and children are described as well as the questionnaires they completed. Statistical considerations are also listed.

In the Results chapter, the outcomes of the testing are listed by hypothesis. Descriptions of the results are related through text and tables.

The final chapter presents a discussion of the results as they relate to previous research. Limitations of the research are discussed. Recommendations for practitioners and for future research are listed.

Chapter II

Literature Review

Introduction

The review of the literature will provide a context and rationale for the hypotheses of this research. The review begins with general considerations in the study of family stress, social supports, and coping with mentally handicapped children. This discussion includes definitions and an outline of one model of family stress and coping. More specific research information on the differences between fathers and mothers of mentally handicapped children follows. The chapter concludes with a summary of research findings as well as a general rationale for the type of research study being suggested here.

Family Stress, Social Supports and Coping

Introduction

The terms stress, social supports, and coping are not unique to families learning to deal with mentally handicapped children. Some of the early conceptualizing about these terms came about after World War II when families had to deal with war-induced separation and reunion (McCubbin, Joy, Cauble, Patterson, & Needle, 1980). Stress, social supports, and coping are terms which probably could be used to discuss a family's (or individual's or group's) reaction to almost any

occurrence (e.g., birth, death, relocation, divorce, employment etc.). In the following sections, definitions of stress, supports, coping and related terms are discussed. Whenever possible, these definitions have been taken from the body of literature dealing with family reactions to a mentally handicapped child. Following this discussion, a model which attempts to show how stress, supports, and coping relate to each other is outlined briefly. Finally, there is a discussion of the need for a systems approach to family research.

Research on Family Stress

Two definitions of stress are offered by Goldberg, Marcovitch, MacGregor and Lojkasek (1986). The first definition emphasizes the build-up of demands upon a person. This view of stress is characterized by the commonly heard "I've been under a lot of stress lately" (i.e, my girlfriend, the bank, my boss, and my parents are all making a lot of demands on me). Stress understood in this way can be measured by life events scales (eg., Sarason, Johnson, & Siegel, 1978) which sum the current stressors in a person's life. Citing work by Selye (1957), Goldberg et al. also define stress as "the individual's response to external demands as indicated by specific physiological changes" (p. 611). These physiological changes might include tiredness, headaches, ulcers or hypertension. Stress understood in this way can be studied by measuring stress symptoms

(eg., The Maternal Malaise Inventory, Rutter, Tizard, & Whitmore, 1970). More simply, Zeitlin and Williamson (1988) define stress as "tension experienced when an event is perceived as harmful, threatening, or challenging to one's feelings of well-being" (p. 138). This definition of stress can be characterized by the commonly heard "I'm really feeling stressed-out today". Another way of measuring stress or the build-up of stressors (things which cause stress) is to look at negative adapatations to life occurrences. If a stressor is seen as a crisis-provoking situation or event that a family is unable to deal with (Gallagher, Beckman, & Cross, 1983), then stress can be measured by such evidence as psychoses, suicides, divorces, institutionalizations of handicapped children, or child abuse.

Somewhat more general definitions of stress and stressor come from the stress and coping model of McCubbin and Patterson (1981). The stressor in this model can be described as "a life event or occurrence in or impacting upon the family unit which produces change in the family social system" (McCubbin & Patterson, 1981, p. 7). Associated with the stressor are hardships such as financial problems and medical problems. Stress is differentiated from stressor as a "state which arises from an actual or perceived demand-capability imbalance

in the family's functioning and which is characterized by a non-specific demand for adaptive behavior" (p.7).

The division lines between these different conceptualizations about stress (as a feeling, as a build-up of demands, as a set of symptoms or reactions, as seen in negative outcomes) are somewhat blurry. In the review of research which follows, it is apparent that these variations of meaning for stress are often used interchangably by authors. Perhaps, these different aspects of stress are too well linked to separate. That one can feel stressed about being stressed helps to illustrate the difficulty of delineating these concepts.

In families with handicapped children there are many variables which may affect stress. Some of these are related specifically to the child's characteristics. Beckman-Bell (1981) divided child-related stress into unalterable characteristics (physical appearance, diagnostic category, sex, age) and alterable characteristics (care-giving demands, behavior problems, temperament, social responsiveness, and rate of development). Other factors which mediate a family's perception of stress are listed by Gallagher, Cross, and Scharfman (1981). These include parental age, socioeconomic status, intelligence, occupation, and income level.

Research on Family Coping

Coping is a concept which, like stress, is subject to a variety of interpretations. Crnic, Friedrich, and Greenberg (1983) report that coping can vary in terms of "mode (information-seeking or action), function (problem-solving or stress reduction), and outcome (more or less adaptive)" (p. 134). McCubbin and Patterson (1981) offer a definition of coping related to their model of stress and coping. Coping is defined as:

> The behavioral responses of family members and the collective family unit to eliminate stressors, manage the hardships of the situation, resolve the intra-family conflicts and tensions, as well as acquire and develop social, psychological and material resources needed to facilitate family adaptation. (p. 14)

Citing the work of Folkman, Schaefer, and Lazarus (1979), Crnic et al. delineate five kinds of coping resources. These coping resources include (1) parental health, energy, and morale which involve the individual's emotional and physical well being; (2) problem-solving skills which allow one to analyze a problem and seek solutions; (3) social networks of supportive relationships; (4) utilitarian resources such as SES and income; and (5) general and specific beliefs including such things as a person's feelings of self-eficacy or religious beliefs. Parents who can draw on at least some

of these resources should be able to adapt positively to their handicapped child. If a family does not have the resources and cannot adapt to meet the demands placed upon it, vulnerability for maladaptive outcomes is increased (Zeitlin & Williamson, 1988). Manipulations of these five aspects of coping have been the basis of family intervention programs such as that reported by Vadasy, Fewell, Meyer, Schell, and Greenberg (1984). Social supports, as will be seen in the next section, appear to be the realm where family intervention seems most eficacious (Dunst & Trivette, in press).

Research on Family Social Supports

Social support is one aspect of personal or family coping which has received much attention in the past few years. Cobb (1982) defined social support as having three parts, including emotional, esteem, and network supports. In combination, these three aspects allow the recipient of social support to feel loved, to feel valued, and to feel a part of a network where there is ongoing communication and mutual obligation. Dunst and Trivette (in press) define social support as "the emotional, psychological, physical, informational, instrumental, and material aid provided by others that influences the behavior of the recipient of the help and assistance"(p. 7). The importance of social support has been documented by Dunst and Trivette. They cite a body of research which offers evidence that social support

either directly or indirectly influences familial well-being, parental health and well-being, satisfaction with parenting, adaptations to life crises, parental styles of interaction, attitudes toward one's child, child temperament, parental aspirations for self and child, and child behavior and development.

When looking at the construct of social support, there are at least two components which can be measured (although Dunst and Trivette further subdivide these into five components). Basically, support has both state and trait aspects (Farran, Metzger, & Sparling, 1986). Support as a state is quantitative. The persons, community resources, and social networks on which a person or family feels it can rely can be summed (e.g., how many babysitters are available, how many friends are seen regularly) and a measure of support is obtained. Support as a trait is qualitative. It can be measured in terms of the degree of satisfaction a person or family feels with support received and not just the absolute number of people in the network.

Other terms related to social support include inter- and extra-familial support and formal and informal supports (Parke 1986). Inter-familial supports are those which husbands, wives, and children within a family offer to each other. Extra-familial supports include the formal networks, such as health services, social services, and educational services, as well as informal

networks, such as the extended family, neighbours, friends and co-workers.

A Model for Relating Stress, Social Supports and Coping

The discussion of family stress, supports, and coping would be incomplete without a brief reference to some of the models which have been proposed for understanding these related concepts. One of these models is the ABCX model formulated by Reuben Hill (McCubbin, Joy, Cauble, Patterson, & Needle, 1980). This model and an extension of it will be outlined in the following section.

According to McCubbin, Joy, Cauble, Patterson, and Needle (1980), Hill's ABCX model of stress "outlined a set of major variables and their relationships which have remained virtually unchanged for over 30 years" (p. 855). In the Hill model, the "A" factor is the stressor event which interacts with the "B" factor, the family's crisis meeting resources, and the "C" factor, the family's definition of the crisis. Together these three factors produce the "X" factor, the crisis. Crisis refers to "the amount of incapacitatedness or disorganization in the family where resources are inadequate" (McCubbin, et al., 1980, p. 857). McCubbin and Patterson (1981) have expanded the basic model of Hill into the Double ABCX (aAbBcCxX) to give recognition to an after crisis effect and the fact that stressors ("aA") may not necessarily be single events. They may pile up and

require a certain amount of time for family recovery or adaptation. The "bB" factor differs from Hill's "B" in that it allows for both a family's current crisis meeting resources as well as for the family's development of new resources to meet the demands of the stressors. The "cC" factor expands on Hill's "C" to include the family's perception of the crisis, of the pile-up of stressors, and of the new, old, and developing resources at its disposal. At this point, the aAbBcCxX introduces a concept known as "coping". Coping (bB+cC) includes both the family perception of the crisis as well as the strategies and resources (social, psychological and material) a family utilizes to adapt to the problem.

In the Double ABCX model, the social, psychological and material resources upon which a family can rely have come to be known as supports. It is difficult to separate the three types of support because they often occur at the same time. Material supports generally concern the goods and services which money or taxes can buy. Psychological supports may include personal self-esteem, personal history of dealing with previous crises, and other personal characteristics such as persistence or optimism upon which one can rely in times of crisis. McCubbin and Patterson (1981) refer to Cobb's (1982) definition of social support as "communicated caring" (p. 189). Communicated caring permits the recipient of support to feel loved, to feel valued, and to feel a part

of a network where there is ongoing communication and mutual obligation.

The final factor of the Double ABCX model, the "xX" factor, refers to both the ongoing maladaptation (negative result) or bonadaptation (positive result) of the family to the stressors with which they must deal. Bonadaptation "results in (a) the maintenance or strengthening of family integrity; (b) the continued promotion of both member development and family unit development; and (c) the maintenance of family independence and its sense of control over environmental influence" (McCubbin & Patterson, p. 11). Maladapatation would assume the opposite effects as these listed for bonadaptation.

The Hill model of stress and coping and the McCubbin and Patterson extensions of it are two related ways of viewing family stress, coping, supports and adaptation to crisis. They have been presented briefly to give recognition to the fact that stress, coping, and supports are concepts with complex relationships.

On problem associated with the Hill stress model and the McCubbin and Patterson extensions is that the order of the letters A, B, C, X implies that the events of the model (stressor, resources, perception, coping, crisis) also occur in sequence. Although this may appear to be the correct order, it is possible to begin a study of stress and coping with any of the components. Byrne and

Cunningham (1985) have attempted to categorize studies of the effects of handicapped children on their families by which aspect of the coping and stress model they begin with or emphasize. The first of these is the "pathological" approach (which corresponds to the psychoanalytic approach described by Tulloch, 1983). In this approach, there is an assumption that the high levels of stress which families with handicapped children endure always result in some degree of psychological impairment for family members and family functioning. Studies with this orientation tend to focus primarily on stress reactions and on the inevitable results--the crises--such as marital breakdowns, suicides, and psychoses within families of handicapped children (e.g., Cummings, 1976; Fotheringham, Skelton, & Hoddinott, 1972).

The second approach outlined by Byrne and Cunningham does not assume that a pathological response is inevitable for all family members. It does, however, attempt to seek out those family members and families which are most vulnerable to the stress of having a handicapped child. These studies (e.g., Beckman-Bell, 1981; Kazak & Clark, 1986; Kazak & Marvin, 1984) attempt to uncover factors which mediate stress, including characteristics of the child (e.g., age, sex, handicapping condition) and of the family (e.g., socioeconomic status, siblings, parent differences).

The third approach to the study of the effects of a handicapped child on a family rejects the assumption that the handicapped child is the source of stress in a family. Rather, it views a family's unmet needs for service as that which leads to stress. These studies (e.g., Bailey & Simeonsson, 1988; Linder & Chitwood, 1984) attempt to document family service needs, their criticisms of service providers and organizations, and their suggestions for changes in the services they receive.

The final approach outlined by Byrne and Cunningham is one which may include the others and is an inversion of the pathological approach. "It emphasises the fact that many families cope with and adapt to the stresses they experience and seeks to discover how they do so" (Byrne & Cunningham, 1985, p. 848). These studies (e.g., Abbott & Meredith, 1986; Bristol & Schopler, 1984) assume normality in families with handicapped children and focus on coping and support mechanisms which families utilize to deal with whatever difficulties they face. Tulloch (1983) describes a similar orientation which she calls "developmental" (p. 57). In this approach to viewing parents of handicapped children, "parental roles are seen to evolve and change dynamically in response to the multiple demands of their exceptional child and their own lives in the greater society" (p. 57). These dynamic changes in parents are to be viewed as natural and

acceptable processes rather than as expressions of pathological deviance.

The Need for a Systems Approach to the Study of Family Stress, Coping, and Social Supports

In the past, family research paid little attention to fathers. Bristol and Gallagher (1986) have traced the evolution of family studies from the point where simple unidirectional (mother to child) models of parent-child interactions were studied to the more recent model of family ecological systems. In the ecological approach, all family members are perceived of as impacting and being impacted upon by all other family members. The extra-familial environments where family members function also affect intra-familial interactions. In the undirectional models, mothers were perceived to have been responsible for the child's problem or lack of problems and the father was considered unimportant (Bristol & Gallagher, 1986). In a systems model, relationships within a family should be looked upon as reciprocal and circular (Crnic, Friedrich, & Greenberg, 1983), that is, mothers and fathers affect each other while they affect their children and their children affect them. In the following section, research will be cited to show some of the multidirectional effects and interactions of family members on child development when a systems approach is used. The focus is on fathers. The material highlights the complexity of family relationships and, thus, the

need for a systems approach. It also draws attention to the unique contributions of fathers to families and, thus, the need to include fathers in any family research. The research cited is drawn from the literature on the development of normal/non-handicapped children. Research on the contributions of fathers to the development of handicapped children is very limited.

The Contributions of Fathers to (Normal) Child Development. Research has shown that fathers can have important effects on child development (Clarke-Stewart, 1978; Lamb, Pleck, & Levine, 1986; Parke, 1981). Easterbrooks and Goldberg (1984) showed that high father involvement (three or more hours per day of direct contact) had significant results for 20 month old children. When given a jigsaw problem-solving task to be completed with their fathers, these children had better task orientation and affect than children whose fathers were not as involved. The authors concluded that fathers contributed to child development by demonstrating alternate styles of interaction (play) and problem-solving (giving emotional support and assistance) and not necessarily duplicating mother styles or activities. Belsky (1980) studied 40 middle class infants of 15 months of age. He observed father styles of vigorous play and concluded that "several individual correlations indicate that fathers who are actively involved with their toddlers (as evidenced by frequent talking and high

rates of verbal responsiveness) have children who exhibit little aimlessness and high levels of creativity" (p. 101). Radin (1981), Radin and Russell (1983), Russell (1983), and Sagi (1982) noted in their research that children of highly involved fathers had increased internality (personal efficacy) than did children with less involved fathers. Higher internality was positively related to higher school achievement for these children. Lamb, Pleck, and Levine (1986) confirmed these findings, noting that father responsivity helped to develop a sense of personal efficacy in children, a basic component of achievement.

The evidence discussed in the previous section supports the fact that fathers have a unique contribution to make to their children's development. However, children have also been shown to have an impact on fathers. For example, fathers have been shown to react differently to sons and daughters. Snow, Jacklin, and Maccoby (1983) found that fathers used more physical and verbal prohibitions with their sons than they did with their daughters. The differential treatment of sons by fathers was also noted in the research of Parke and Sawin (1980). These researchers found that over time fathers favoured their sons with more visual attending and stimulation (while mothers showed the same reactions to their daughters). Parke and Sawin (1980) and Snow et al. (1983) both noted that fathers tended to hold their

daughters more closely than they held their sons (an action related to dependency in girls). Thus, one aspect of a child, his or her gender, has been shown to affect how a father interacts with his child. One could speculate that other child characteristics might also have an effect on a father's interaction with his child and the child's development. These might include the child's ability level, activity level, age or achievements.

The previous sections dealt with how fathers can affect their children and how children can affect their fathers. Fathers can also affect their wives in ways which have an effect on the child's development. Clarke-Stewart (1980) noted a very direct influence of fathers on mother-child interactions. When fathers were in the same room as the mother and child, the mother talked, played with, and responded less with the child than when she was alone. More indirect effects of fathers upon mothers were summarized by Bristol and Gallagher (1986). These authors cite research showing that the mother's perception of support from her husband affected her display of positive affect to the child as well as her responsivity and feeding behavior with the child.

These illustrations and research from the (normal) child development literature only begin to show the complexity of family systems research. Mothers, siblings, other relatives, institutions beyond the home,

and friends would also interact with the family and be affected by the family. Nevertheless, it is essential to note from this literature that fathers have a place in the family that is different from that of mothers and that a father is an important agent in a family. With this in mind, it is startling to find research studies which describe "parental" or "family" stress, supports and coping with handicapped children when only mothers have been studied (e.g., Beckman, 1983; Dyson & Fewell, 1986; Holroyd & McArthur, 1976; Minnes, 1988).

Differences in Coping, Social Supports, and Stress for Mothers and Fathers of Mentally Handicapped Children

Introduction

In the following section, the literature concerning stress, supports and coping for mothers and fathers of mentally handicapped children is reviewed. Only the literature which explicitly declared that either mothers and/or fathers were studied was reviewed. There are some studies extant which speak about "parent" or "family" stress, supports, and coping, but do not give enough information about the subjects or results to allow for discrimination of mother data from father data (e.g., Abbott & Meredith, 1986; Bennett & Algozzine, 1983; Dunlap & Hollinsworth, 1977). Finally, the literature included in this review involved mentally handicapped children as one of the groups listed as subjects.

Studies of Mothers of Handicapped Children

A variety of studies exist describing both mother stress and mother coping and supports. Although this research does not reveal information about mother and father differences, it does give some baseline information about mothers. In terms of stress, many of the studies focus on the characteristics of the handicapped child as a way of discovering which mothers will be more vulnerable. Both Donovan (1988) and Holroyd and McArthur (1976) studied differences between mothers of children with autism and mothers of children with Down Syndrome. These two groups are attractive to study because of their differences. For example, Down Syndrome is usually diagnosed at birth. It is known to result from chromosomal abnormalities and it results in a specific set of recognizable features in the child. Autism, on the other hand, is a disability which is not usually diagnosed until well into the toddler years. Its causes are relatively unknown and children with autism do not usually have noticably different physical features than nonhandicapped children. It seems reasonable that these two conditions would result in different outcomes in terms of parental stress and coping. Donovan (1988) found that greater stress was associated with autism but that all the mothers reported a high degree of marital adjustment difficulties. In the group of adolescents with autism, mothers found it most difficult to deal with

their children's lack of self-help skills and attitudes. Donovan also found some evidence of the relationship of family socioeconomic status (SES) and stress. Mothers of lower SES groups indicated lower marital adjustment than mothers from higher SES groups. Holroyd and McArthur (1976) studied children aged three to twelve and found that the mothers of autistic children experienced more stress than the mothers of children with Down Syndrome. The higher stress for autistic children was associated with the children's dependency, physical disability, personality and behavior problems. Higher stress was also associated with the mothers' concerns about keeping the child occupied and with the effects of the child on the rest of the family. The mothers of the autistic children were more upset and disappointed with their children than were the mothers of children with Down Syndrome.

Other researchers have found that child characteristics affect mother stress. Beckman (1983) found that more parent and family problems were associated with greater difficulty of care of handicapped children. The children's age and sex did not affect stress scores. Similarly, Minnes (1988) found that the degree of handicap was associated with stress, such that mothers of more mildly handicapped children reported less stress associated with both child care and effects on the family. Bristol (1984) found that stress was highest for

mothers of autistic children when their children were boys and when they were older (specific ages not given). Petersen (1984) found that the greater the number of problems/stressors associated with the child, the higher the degree of maternal dysfunction in terms of health and marital adjustment. Overall, there appears to be general agreement that the amount of care the child needs is positively associated with the amount of stress experienced. There is some disagreement about whether age and sex of the child are important influences in the amount of stress.

Both coping and supports have been studied to determine whether mothers' stress is diminished when coping strategies and supports are better utilized. Dunst, Leet, and Trivette (1988) found that adequate family resources such as food, shelter, time to be with family and friends, etc. were associated with higher degrees of family well-being even when the effects of the mothers' ages, SES, children's ages, and children's levels of development were statistically removed in regression analyses. When Bristol (1984) looked for differences between high and low stress mothers, she found that the low stress mothers reported greater perceived support from spouses, from both the mothers' and fathers' families, from other parents of handicapped children, and from professionals. Bristol also found that for mothers, "a close-knit, supportive home

environment, being able to express feelings openly, and actively participating in activities outside the home appear to contribute to a more accepting and competent relationship with the child and with the spouse" (p.295). For these mothers of autistic children, the characteristics of the family became a resource from which to draw support. In terms of coping, Bristol found that trusting their children's educational programs to do the best for the children, learning how to help their children, and believing in God were the three most commonly used coping strategies for the mothers studied. Higher coping scores (more ways of coping) were associated with better (as judged by trained interviewers) parenting. Lower numbers of stress symtoms were associated with coping strategies aimed at maintaining family integration and cooperation, an optimistic view of the situation, social support outside the family, self-esteem and personal psychological stability.

Confirmation of the place of social supports in mediating stress was found by Petersen (1984). Such things as emotional support, love and affection, financial resources, satisfaction with community resources and satisfaction with the division of labour in the home all contributed to more satisfying outcomes for the family. Those mothers with high stress and many

resources had fewer health and marital problems than those with high stress and few resources.

Studies Comparing Mothers of Handicapped and Non-Handicapped Children

Common sense would indicate that children with handicaps should be more stressful for mothers than non-handicapped children. However, it is possible that being the mother of any child is stressful and thus all mothers should have high stress. If comparisons of mothers of handicapped children and mothers of non-handicapped children were to show no differences, doubt would be cast on research where only the mothers of handicapped children were studied.

In four separate studies, researchers have shown that stress was higher for mothers of handicapped children than for mothers of children without handicaps (Chetwynd, 1985; Dyson & Fewell, 1986; Friedrich & Friedrich, 1981; McKinney & Peterson, 1987). McKinney & Peterson reported that child characteristics including child adaptability, acceptability to the mother, demandingness, distractability and degree of attractiveness to the mother contributed to higher stress scores for mothers of handicapped children. High spousal support was associated with lower maternal depression scores and increased sense of competence, but supports in general were not associated with reduced stress related to child characteristics. Chetwynd (1985) used a measure

of stress symptoms to show that mothers of handicapped children experienced higher stress. Chetwynd also found that for the mothers of handicapped children, higher stress was associated with both higher and lower than normal activity levels in their children, with greater amounts of social isolation, and with fewer breaks from the child. The Friedrich and Friedrich (1981) findings were based on a measure of the pile-up of stressors. They found that for the mothers of handicapped children high stress was associated with less marital satisfaction, less psychological well-being, less social support and less religiosity. Dyson and Fewell (1986) found that one source of stress for a group of mothers with handicapped children was their higher pessimism about their children's characteristics and physical incapacitation. Despite this, the mothers of handicapped children had more social support and perceived more helpfulness from professionals, programs and from neighbours than did a group of mothers whose children were not handicapped. Within the group with handicapped children, higher stress was associated with increased severity of handicapping condition but not with the child's sex. Finally, it was noted that stress and support levels were negatively correlated for mothers with handicapped children.

Studies of Fathers of Handicapped Children

A few studies exist in which fathers of handicapped children have been researched either by themselves or as compared to fathers of non-handicapped children. These studies help to create a knowledge base about fathers, although they do not specifically mention father/mother differences.

Price-Bonham and Addison (1978) have reviewed early investigations about fathers of handicapped children. In summarizing the work of Chigier, 1972; Farber, 1962; Farber, Jenne, and Toigo, 1960; and Tallman, 1965, Price-Bonham and Addison concluded that a father's reaction to his mentally handicapped child depended to some extent on the child's sex. Fathers were more accepting of a mentally handicapped daughter than they were of a mentally handicapped son. This may have occurred because fathers were expecting their daughters (handicapped or non-handicapped) to be dependent and were less achievement-oriented about their daughters' futures. With a mentally handicapped son, however, the fathers may have had much greater disappointment because their higher achievement expectations of boys would never be realized. Another stressor for fathers, identified by Price-Bonham and Addison, was the financial burden of extra expenses due to their children's handicapping conditions. Fathers' careers were sometimes affected because of their need to move to be closer to medical or educational

facilties. In light of changes in Canadian and North American society in the last fifteen to twenty years, these earlier conclusions about fathers may need to be reexamined. Some of today's fathers are less oriented to traditional roles (Hoffman, 1983; Russell, 1983; Russel & Radin, 1983) and in many families husbands and wives are both working at careers. Also, for Canadians, universal free medical care and access to education for all children should be easing some of the financial concerns for parents of handicapped children.

Studies Comparing Fathers of Handicapped and Non-Handicapped Children

The research of Cummings (1976) about fathers of non-handicapped children, fathers of mentally handicapped children, and fathers of emotionally disturbed children is an example of research described by Byrne and Cunningham (1984) as taking a "pathological" approach. Cummings found that the fathers of mentally handicapped children differed from the other groups in terms of higher depressive feelings and preoccupation with the child but lower self-esteem, lower sense of fathering ability, and lower enjoyment of the child. On a personality inventory, the fathers of mentally handicapped children scored higher than did the other groups of fathers on order needs (neatness and organization), but lower on dominance (assertiveness in a group) and heterosexuality (ready expression of sexual

interests in members of the opposite sex). Summing these results, Cummings (p. 251) stated that "this triad of effects, taken in combination, is strongly suggestive of a constricted male accentuating his compulsive tendencies in order to suppress his aggressive and sexual drives". Cummings reasoned that this occurred because fathers had no way of ameliorating their stress when compared to their wives. Mothers, who were generally far more involved with childcare than fathers, could at least take comfort in the fact that they were doing something for their handicapped children. One other finding of the Cummings' research should be noted. Cummings found no significant differences for the three groups of fathers based on their children's age or sex.

Cacioppo and Wood (1984) attempted to replicate the results of previous research which had shown that fathers of mentally handicapped children and emotionally disturbed children were more stressed than were the fathers of normal children. Using personality inventories, Cacioppo and Wood found that there were some differences between the fathers of emotionally disturbed children and the fathers of mentally handicapped children, but that overall, neither was more disturbed than the fathers of normal children. In fact, these authors concluded that the fathers of mentally handicapped children had an overall perception of their children that was positive rather than stressful.

It is difficult to draw conclusions about the effects on fathers of mentally handicapped children with so little recent research evidence available. Research findings are equivocal--fathers of mentally handicapped boys may have a more difficult experience than fathers of mentally handicapped girls and fathers of mentally handicapped children in general may experience more stress than fathers of non-handicapped children. The next few sections will review studies where both mothers and fathers have been examined at the same time.

Studies Which Compared Mothers and Fathers of Handicapped Children

In this section of the literature review, those studies which mentioned specific observations of both mothers and fathers are reviewed. Findings that are reported describe differences between mothers and fathers, although it is clear that similarities were found. The studies may be divided into pre-1980 research and post-1980 research.

Pre-1980 Research. Pre-1980 research which compares mothers and fathers tends to focus on stressors and stress reactions. Coping is referred to in terms of the parents' ability to adjust to the child. Tallman (1965) found that fathers were less skillful than mothers in coping with their mentally handicapped child. Mothers adapted better and better mother adaptation was associated with increased social development for the

child. When the child was a boy, fathers tended to react in the extremes of either total withdrawal or great involvement, but when the child was a girl, involvement was limited. Little effect of the child's sex was noted for the mothers. For fathers of children with Down Syndrome, there were lower adaptability scores than for fathers of children with other handicapping conditions. Tallman suggested that this was because Down Syndrome has accompanying physical symptoms which make the disability obvious. Gumm and Gubrium (1972) found that father concerns were different than mother concerns. Fathers focused more on instrumental aspects (the family's relation with the outside world including goal attainments such as completing high school) whereas, mothers were more focused on the expressive aspects (the internal facets of the family including managing the family's internal tension and integration).

In a study attempting to research the coping abilities of parents in relation to the parent's sex and the child's age and sex, Burke (1973) found that when mothers and fathers were compared, mothers scored higher on adaptability measures and appeared to be more successful at parenting than fathers. When the effects of the child's age and sex were included in analyses, it was found that mothers of young (age range for young children was three to seven and older children was ten to nineteen) girls coped the best and were the least

anxious. Mothers and fathers of boys had the lowest adjustment scores and mothers of girls had the highest adaptability scores. When fathers alone were analyzed, fathers of young boys were better adjusted than fathers of older boys and fathers of young girls were the least depressed of the fathers when child age and sex were studied. When only the mothers were analyzed, mothers of older boys were more depressed than mothers of younger boys, and mothers of younger boys were better adjusted than mothers of older boys.

This older group of studies tended to show that mothers and fathers reported different stressors and different adaptational outcomes. The term "coping" was used to describe adaptation rather than to describe the resources the fathers or mothers used for adaptation. This is somewhat different from the definitions used by McCubbin and Patterson (1981) where coping is defined not so much as the end result but as the process. In the pre-1980 studies, little is reported about how or why mothers generally adapted better than fathers and little information about coping strategies is given.

Post 1980 Research. Renewed interest in comparisons of mothers and fathers is seen in the 1980's, possibly because of changing social values (e.g., mothers working outside of the home) and parent roles (e.g., fathers participating more in childcare). Bray, Coleman, and Bracken (1981) examined some of the critical events

(stressors) of parenting handicapped children. There were only a few differences reported between mothers and fathers. Mothers were more likely to report that finding educational services was a major critical event if their child was a boy. Fathers were more likely to report that being told the prognosis for their child was a critical event if their child was a boy. Again, here is evidence of greater emotional pain for fathers of mentally handicapped boys, associated, perhaps, with the fathers' bigger dreams for sons.

Gallagher, Cross and Scharfman (1981) studied groups of parents of handicapped children. The groupings were based on whether expert opinion determined that the parents were "successful" or "average" (based on parent relationship with the child and spouse, ability to maintain community relationships and to work with professional staff). The study found that all of these families were experiencing stress and that there were many variables besides the handicapped child which contributed to their stress (such as the financial status of the family). For the fathers, there were no significant differences between successful and average fathers on measures of stress or support, most support coming from the spouse and friends. Gallagher, et al. reported that the fathers were searching for ways to be more supportive in their families but that neither they nor their wives were certain how to accomplish this.

Perhaps, the findings of Vadasy, Fewell, Meyer, Schell, and Greenberg (1984) offer some suggestions for fathers. These researchers found that 13% of the fathers studied versus 23% of the mothers were dissatisfied with their present division of childcare. As well, 39% of fathers thought that they were sharing housework equally with their wives, but only 13% of the wives thought that housework was being shared equally. It was at the level of daily care that mothers experienced most stress whereas fathers were concerned with the broader picture of their children's futures.

Two studies examined both stress and social supports for mothers and fathers. Dunst, Trivette, and Cross (1986) found that mothers reported greater time demands placed upon them by their handicapped child than did fathers. The mothers also reported poorer emotional and physical health than did their husbands. In terms of support, no husband/wife differences were reported. However, higher numbers and higher satisfaction with social supports were associated with reduced overprotection of the child, more child acceptance in the community, and fewer behavior problems with the child. Also, support was more likely to influence well-being among parents of boys (it is not stated whether these boys were more difficult to manage than the girls). Again, caution is in order because the correlation between supports and reduced negative consequences does

not mean that supports caused reduced stress and better outcomes.

Goldberg, Marcovitch, MacGregor, and Lojkasek (1986) also studied mothers and fathers but grouped them by etiology (Down Syndrome, Neurologically Impaired, and Unknown Etiology). Overall, mothers reported significantly more symptoms of stress than did fathers, but all scores were within the normal range. Wives were more supportive of their husbands than were husbands of their wives. Fathers reported higher self-esteem, more internal locus of control, but less social support than mothers. According to Goldberg et al., social support was probably higher for mothers because they had more contact with professionals than did the fathers and thus more opportunities to experience support than did the fathers. Mothers may also have reported receiving more support because persons close to them recognized that they were responsible for the larger part of an increased load in childcare. Of the three groups, parents of children with Down Syndrome reported the most support. When fathers were looked at as a group, the fathers of children with Down Syndrome received more support than did the fathers in the other two groups. There were no differences among the three groups of mothers in terms of support.

Based on limited data, it can be concluded that some differences exist between mothers and fathers of

handicapped children. They experience stress, coping and supports differently and some differences can be attributed to child characteristics such as the child's sex and developmental delay. Mothers seem to experience greater stress than do fathers and this appears to be due to the larger load of childcare the mothers carry. At least some fathers were concerned about giving more support to their wives although they were unsure about how to do it.

Studies of Mothers and Fathers of Handicapped Children Compared with Mothers and Fathers of Non-handicapped Children

Three studies (Salisbury, 1987; Waisbren, 1980; Wishart, Bidder, & Gray, 1981) which compared mothers and fathers of handicapped children with mothers and fathers of non-handicapped children all concluded that there were few differences between these two groups. Salisbury suggested that normal age-related parenting concerns accounted for the stress reported by both families of handicapped and non-handicapped children. Salisbury found that single parents were significantly more stressed than two parent families in which two adults shared the concerns and childcare. Wishart et al. found that even though there were few differences between the two types of families, there were some differences based on the etiology of the handicapped child's disorder. Fathers of infants with Down Syndrome had significantly

more stress symptoms than did fathers of children with severe delays, moderate delays or normal controls. Mothers of children with severe delays evidenced higher stress symptom scores than did the mothers in the other groups.

The study by Waisbren (1980) produced some complex findings as concerns social supports. For both mothers and fathers of mentally handicapped children (maximum age of 18 months), more supports were related to higher stress. These parents' positive feelings about their children were related to increased supports but the increased supports were counterbalanced by more stress symptoms. Fathers who felt that their own parents were very supportive engaged in more activities with their children and had more positive feelings about themselves. Nevertheless, these fathers had higher stress symptoms. Mothers availed themselves of more varied informal supports including their own extended families and in-laws, but neither mothers nor fathers seemed to rely heavily on formal support services such as psychologists, doctors, or educators.

Summarizing the Differences in Coping, Supports and Stress for Mothers and Fathers of Mentally Handicapped Children

The literature on stress, supports and coping for mothers and fathers of mentally handicapped children has been reviewed. It is evident that only a small body of

research exists which speaks to the question of mother and father differences. In many ways, mothers and fathers may be quite similar in how they experience stress and in the ways in which they utilize coping mechanisms and social supports. However, it is the differences which will be of specific use to those who wish to provide intervention services which attempt to meet the needs of each family member.

Review of the research on stress, supports, and coping for mothers and fathers of mentally handicapped children suggests the following four themes.

1. No parent or family is free of stress (Price-Bonham, 1978). Fathers, mothers, parents of handicapped children, and parents of non-handicapped children all experience stress whether it is described as a set of symptoms, as a pile-up of demands or as negative outcomes and feelings.

2. Social supports and available and helpful coping strategies make a difference in how stressors are perceived and how one deals with stressful feelings and outcomes. However, the relationship of coping and supports with stress is very complex. One is left with a question each time coping and supports are associated with stress. The question has to do with causality--do good coping strategies and an abundance of social supports reduce the severity of stress a family perceives or does stress cause a family to develop coping

strategies and go out looking for supports? Is there a combination of these causes and effects? Since it is nearly impossible to know which famlies will give birth to handicapped children, it is also impossible to know their levels of stress, supports and coping strategies before the advent of the handicapped children to their homes. Without data about these families' lives before and after they had a handicapped child, it is very difficult to discuss causality.

3. There are some differences between mothers and fathers in terms of stress, coping and supports. Although research evidence is contradictory, some of these differences are related to the mentally handicapped child's age, sex, etiology, degree of disability and level of care needs. Other differences may be due to parent age, SES, and types of services available for the parents where they live.

4. The data base for describing both mothers and fathers is small and needs to be enlarged to be of use to researchers and practitioners. When discussing things as complex as families and their adaptation to a handicapped child, it is essential that research findings be replicated numerous times to ensure that "significant" findings are truly representative of differences or relationships in a population (Borg & Gall, 1983).

A General Rationale for Studying the Differences in Stress, Supports, and Coping between Mothers and Fathers of Mentally Handicapped Children

In this section a general rationale for studying the differences in stress, supports, and coping between mothers and fathers of mentally handicapped children is discussed. More specific justifications for hypotheses are provided in the next chapter.

In the first place, it is important to study this topic because of the growth of conceptualizing about families. The review by Bristol and Gallagher (1986) of the evolution of family research has been mentioned in the first section of the literature review. These authors traced this evolution from undirectional (mother to child) models of parent-child interaction to the most recent multidirectional family ecological systems approaches. This updating of theoretical models demands that older conceptions of mothers and fathers be reanalyzed and updated if necessary. For example, many studies use the terms "family" or "parent" stress when only mothers have been studied (e.g., Beckman, 1983). It has also been noted that many older studies are constructed with a pathological bias and do not take into account a parent's ability to adapt to stress (Crnic, Friedrich & Greenberg, 1983).

A second reason for doing this type of research is related to the first. North American society is changing in ways which may invalidate older research. Such things as the women's liberation movement, two career families, more extensive daycare, increased educational and social services for mentally handicapped persons, deinstitutionalization of handicapped persons, and rights movements for the disabled may have changed how families operate. For example, the option to institutionalize a handicapped child is not as readily available to parents now as it was in the past. This may influence parents' perceptions of their children. Again, assumptions about mothers and fathers may need reanaylsis and updating.

A third reason for studying mother and father differences is simply to add to the knowledge base about mothers and fathers (Bristol & Gallagher, 1986). There are very few studies extant which report on both mothers' and fathers' stress, supports, and coping with mentally handicapped children. Without a solid knowledge base, those who plan interventions for families may overlook or not address issues which are important to different members of the family. It cannot be assumed that one intervention strategy will serve all members of a family (Beckman-Bell, 1981). Adding to the knowledge base, especially about things as complex as families and family adaptation to a handicapped child, is necessary to ensure

that differences or relationships of variables are truly "significant".

A fourth reason for this type of study is related to the third. In addition to having a small knowledge base, the research community has yet to fully operationalize the terms used in the stress models. There is still a need to clarify concepts (Schilling & Schinke, 1984; Wikler, 1986) and produce more exact measurement instruments. More research dealing with mother and father stress, supports, and coping should add to the understanding of these concepts and contribute to their continual defining and redefining.

Chapter III

Statement of the Problem

Introduction

In this chapter, the research of importance to the hypotheses of this study is summarized, after which the hypotheses are stated. Implications of the research are discussed briefly.

First Hypothesis: Mothers and Fathers and Stress

Premises. The survey of the research on stress revealed that mothers and fathers of mentally handicapped children report some differences in stress and coping. Based on minimal data, it can be said that mothers report more stress symptoms/reactions than fathers (Dunst, Trivette, & Cross, 1986; Goldberg, Marcovitch, MacGregor, & Lojkasek, 1986). In terms of stressors, mothers are more concerned with the day to day needs of the child (Dunst, Trivette, & Cross, 1986; Gumz & Gubrium, 1972; Vadasy, Fewell, Meyer, Schell, & Greenberg, 1984) whereas fathers appear to be more concerned with their children's futures (Vadasy, et al., 1984). The sex of their handicapped child is an important concern for fathers. When the child is a boy, research has shown that fathers were more likely to show extremes in their involvement in childcare (Tallman, 1965), to be less adjusted to their roles as parents (Burke, 1973), and generally to be more emotionally affected (Price-Bonham & Addison, 1978).

Studies which dealt only with mothers have illuminated factors which may also affect fathers. Child characteristics, such as amount of developmental delay, level of activity, amount of care needed, and behavior problems all seem to contribute to mother stress (Beckman, 1983; Chetwynd, 1985; Petersen, 1984). The age of the child may also be a factor in stress for parents (Burke, 1973).

Finally, studies of handicapped children which grouped the subjects by etiology have shown that etiology is a factor related to stress. Mothers of autistic children reported more stress than mothers of children with Down Syndrome (Donovan, 1988; Holroyd & McArthur, 1976). In another study, it was shown that mothers of the severely handicapped children reported more stress than mothers of children with moderate handicaps or Down Syndrome (Salisbury, 1987). The same study showed that fathers of children with Down Syndrome reported more stress than fathers of moderately or severely handicapped children.

Statement of the First Hypothesis. Mothers and fathers of preschool aged mentally handicapped children will report differences in the stress they experience. Fathers of boys will report higher levels of stress than fathers of girls.

Statement of the First Null Hypothesis. Mothers and fathers of preschool aged mentally handicapped children

will not report differences in the stress they experience. Fathers of boys will not report higher levels of stress than fathers of girls.

Explanation. For the first part of the hypothesis, a non-directional statement was chosen, although a case might be made for choosing an hypothesis stating that mothers would report higher stress levels than fathers. However, the paucity of studies comparing mothers and fathers, the age of some of the studies, and the equivocal nature of the available research dictated that a non-directional hypothesis be made. The second part of the statement of hypothesis is directional because there is more research extant in which fathers reported more stress when their handicapped child was a boy than when their child was a girl.

Stress in this hypothesis will be taken to mean both symptoms or reactions to stressors as well as the actual amounts of stressors the mothers and fathers experience. As noted previously, these concepts are often difficult to disentangle. In research such as this study, the goal is not so much to delineate theoretical definitions, but rather to see how some facets of stressors and stress interact for mothers and fathers of handicapped children. Information for this hypothesis was collected using a self-report questionnaire, the Parenting Stress Index (PSI), which both parents completed. The PSI is fully described in the Method chapter.

Second Hypothesis: Mothers and Fathers and Social Supports and Coping

Premises. The survey of the literature on coping and social support revealed that mothers and fathers of mentally handicapped children reported some differences. These findings were not numerous. Some of the most recent research concluded that social supports were more important to mothers, but fathers relied more on internal resources such as self-efficacy and high self-esteem (Goldberg, et al., 1986; Waisbren, 1981). The support of the father's family was an important support for both mothers and fathers (Waisbren, 1981). An important source of social support for fathers was their wives (Gallagher, Cross, & Scharfman, 1981; Goldberg et al., 1986) but husbands did not necessarily give as much support to their wives as they received from their wives. In terms of coping, fathers have been shown to cope by either getting very involved with their child or not getting involved at all (Tallman, 1965). Cummings (1976) felt that mothers coped better with their handicapped children than did fathers. The mother's predominant role in childcare allowed her to do something for the child, whereas, a father who was uninvolved with childcare had few other ways to feel helpful and thus ameliorate the stress he felt. For both mothers and fathers, having a good network of social support was associated with better outcomes for the child and the marriage.

Some of the studies dealing only with mothers have revealed ideas about how mothers cope and utilize supports. The adequacy of resources has been associated with higher degrees of family well-being (Dunst, Leet, & Trivette, 1988; Petersen, 1984)). Bristol (1984) found that higher levels and satisfaction with support from husbands, the extended family, other parents of handicapped children and professionals could distinguish low stress mothers from high stress mothers. In terms of coping, Bristol found that mothers reported that they coped by trusting in their children's school programs, learning to help their children, and by trusting in God. Mothers of handicapped children used more formal and informal supports than mothers of non-handicapped children (Dyson & Fewell, 1986).

The relationship of supports to stress has been studied although results are contradictory. Some researchers reported the association of high stress with low supports (Dyson & Fewell, 1986; Friedrich & Friedrich, 1981) while others reported that supports in general were not associated with reduced stress, especially as related to the characteristics of the child (McKinney & Peterson, 1987).

Statement of the Second Hypothesis. Mothers and fathers of mentally handicapped preschoolers will report differences in terms of the coping strategies and social supports they utilize.

Statement of the Second Null Hypothesis. Mothers and fathers of mentally handicapped preschoolers will not report differences in terms of the coping strategies and social supports they utilize.

Explanation. A non-directional statement was chosen for this hypothesis for similar reasons as for the first hypothesis. Little research has been done in this field and the results must be considered as tenuous until more research is completed.

Coping will be understood as those material, social, and personal resources a person utilizes to eliminate stressors, manage hardships, resolve conflicts, and facilitate adaptation to a stressful situation (McCubbin & Patterson, 1981). Coping can be understood best in terms of strategies--some useful for adapting positively and some leading to more negative outcomes. For the present research, coping was measured using the Coping Health Inventory for Parents (CHIP). Both parents completed this self-report questionnaire which is more fully described in the Method chapter.

Social support is one of the many coping resources on which a person can call. In this hypothesis, social support is understood as the aid provided by others (emotional, psychological, physical, informational, instrumental, and material) both formal and informal which has an influence on the recipient of the aid (Dunst & Trivette, in press). Social support is measurable in

terms of both its quantity and quality. For the present research, social supports were measured using the Social Support Inventory (SSI). Both mothers and fathers completed this self-report questionnaire which is fully described in the Method chapter. The use of the SSI supplements the information about coping that will be obtained on the CHIP.

Implications

Although the present research study is not intended to test theories and models of stress and coping, the results may provide information about some of the variables necessary for inclusion in a full scale study of family stress, coping and social supports. Increased knowledge about the utility of the questionnaires employed in the study may prove beneficial to their authors and also to clinicians looking for ways to assess families. Knowing that there are some essential differences between fathers and mothers may help clinicians and teachers to individualize child and parent interventions. Efforts to keep mentally handicapped children with their natural families will benefit from a better understanding of parents' needs and feelings as they relate to their children and to each other.

Chapter IV

Method

Introduction

In this chapter the process used to test the hypotheses and to obtain results is discussed. The general procedure for gathering data, ethical concerns, and information about the subject parents and children will be followed by full descriptions of the questionnaires that the parents completed. The chapter ends with a note on statistical procedures.

General Procedure

The collection of data for this research took place during two time periods over the course of two years, 1986 to 1988. Subject families were contacted through the directors of various preschool programs for mentally handicapped children in Edmonton, Alberta. These programs included school and home-based programs as well as integrated daycare programs. Information about the study was sent to the homes by the preschool program staff and those parents who wished to participate returned a signed consent form to the researchers. (The consent form and letter are reproduced in the Appendix.) The parents were then contacted by phone and an initial appointment was arranged. The details of the project were explained to them during this first visit. If mothers and fathers were willing to proceed, they were

given a group of questionnaires and asked to complete them separately. Within a short period of time, they were visited again to collect the first set of questionnaires and to be given a second set. The second set of questionnaires was collected within two weeks of their distribution and either both or one parent was then interviewed to obtain basic demographic data.

Although this study focused on parents, a measure of the children's mental ages was also collected. A trained early childhood educator successfully tested thirteen of the children using the Bayley Scales of Infant Development (Bayley, 1969). It was intended that all the children be tested using the Bayley Scales, but because of difficulties with either reaching a ceiling or not obtaining a basal level other measures had to be used with three children. For one multiply handicapped child, an estimated mental age was produced by the child's psychologist. In another case, because of the child's physical disabilities, the Merrill-Palmer Scale of Mental Tests (Stutsman, 1931) was used to determine the child's mental age. In one other case, the Leiter Scale (Leiter & Arthur 1969) was used to determine the mental age of the child.

Ethical Considerations

Participant families were immediately assigned a number and all information which could be used to identify them was kept separate from testing and

interview results. Families were assured at each step in the process that they could withdraw at any time from the project. No remuneration was offered to the families for participating.

Subjects

Parents

Mothers and fathers of mentally handicapped children of preschool age were the subjects of this research. Two parent families were studied, as opposed to single mothers or single fathers. Research has shown that single mothers react differently to their handicapped children and situation than do women who are married (Beckman, 1983; Salisbury, 1987). Two parent families afford researchers the chance to view two responses to a handicapped child which are already closely matched. A husband and wife differ in terms of their sex and the roles which they take on within their family, but they do experience the same child, live at the same socio-economic status, are usually about the same age, and usually have similar educational backgrounds.

Children

Preschool-aged mentally handicapped children were chosen as a focus for this research. In studies of stress and coping for parents, it is important to control for the age of the child (Salisbury 1987). Controlling for age allows one to see the effects of other variables such as the child's sex or disability without confounding

results because of the different abilities or experiences that children of different ages have.

Wickler (1981) hypothesized that five developmental crises--times of increased stress--could be identified for families of mentally handicapped children. These were based on normal child development milestones. The five included ages 12 to 15 months when the child should have begun to walk, ages 24 to 30 months when the child should have begun to talk, when the child should be starting kindergarten (age 4 or 5 depending on school district), the onset of puberty, and the 21st birthday. Thus, the study of parents of mentally handicapped children of preschool age may reveal some evidence of elevated stress. Friedrich & Friedrich (1981, p.553) came to a similar conclusion, noting that "parents of infants and preschool children may face more intense stress during the period of initial adjustment to the child's handicap..."

Measures

Mental Age of the Children

The Bayley Scales of Infant Development. The Mental Scale of the Bayley Scales of Infant Development (Bayley, 1969) was used for the purpose of describing the children who were the focus of the present research. The Mental Scale allows the examiner to obtain a mental age for the child. This provides a measure of the severity of the child's disabilities when compared with the child's

chronological age. The Bayley Scales also render scores for motor development and infant behavior, but these were not necessary for the purposes of the present research.

The Bayley Scales were standardized on 1,262 non-handicapped children who were living with their parents and whose ages were between 2 and 30 months. This group of children was selected as representative of the American population and was controlled for sex, race, education of the head of the household, and geographical area. Split-half reliability coefficients for the Mental Scale range from .81 to .93 for the 14 age groupings used in the sample. Tester-observer agreement for the administration of the Mental Scale to 90 children was shown to be 89.4 percent agreement. Test-retest reliability for a one-week interval obtained a coefficient of 76.4 for the three scales of the Bayley. The concurrent validity of the Mental Scale was tested by correlating scores for the 24 month-old children of the sample with their scores on the Stanford-Binet IQ Test. The result was a correlation of .57, showing moderate concurrent validity of the Bayley with the Stanford-Binet test.

The Bayley Scales are widely accepted as measures for establishing a (non-handicapped) child's current developmental status in relation to other children of the same age (Collard, 1972; Damarin, 1978; Naglieri, 1981). This acceptance is based on the Bayley's "careful

standardization, high reliability, and broad coverage of many aspects of the behavioral repetoire of infants" (Collard, 1972, p. 402).

Another accepted use of the Bayley Scales is that of identifying infants with development disabilities (Boyd, Welge, Sexton, & Miller, 1989; Dubose, 1976; Erickson, Johnson, & Campbell, 1970; Naglieri, 1981; Siegel, 1981; VanderVeer & Schweid, 1974; Whiteley & Krenn, 1986). Naglieri (1981) considers the Bayley Scales to be "useful instruments for young children who are severely and profoundly mentally retarded because they have sufficient numbers of items that such children can perform" (p. 548). Siegel (1981) studied 148 infants at 4, 8, 12, and 18 months and concluded that the Bayley Mental Scale was capable of detecting many of the children at risk for developmental delay at age 2. VanderVeer and Schweid (1974) used the Bayley Scales to identify 23 children whose ages ranged from 18 to 30 months as mentally handicapped. One to three years later, 12 of 15 of these children identified in the original study as moderately to profoundly handicapped (based on AAMD Categories) tested out in the same category. The study of Boyd, Welge, Sexton, and Miller (1989) was formulated to test the concurrent validity of the Battelle Developmental Inventory (Newborg, Stock, Wnek, Guidubaldi, & Svinicki, 1984) with the Bayley Scales. The research involved thirty children aged 0 to 36 months with a variety of

syndromes and other handicapping conditions resulting in developmental disabilities. The conclusion of this research showed strong support for the concurrent validity of the Battelle with the Bayley Scales (the equivalent mental scales obtained a correlation of .89). These results could also be viewed as confirmation of the validity of the Bayley Scales which are much older instruments than the Battelle Inventory. Taken together, these various studies support the utility of the Bayley Scales for identifying children with suspected mental handicaps.

The Merrill-Palmer Scale of Mental Tests. One child was tested for mental age using the Merrill-Palmer Scale (Stutsman, 1931). This scale was developed for young children ages 24 to 63 months. It emphasizes performance rather than verbal ability. As such, it has been found to be useful for the global assessment of the development of deaf children, children who do not speak English, and children with developmental delays (Loeb, 1985). Gould (1975) reports on the use of the Merrill-Palmer with severely mentally handicapped children and cites research showing its usefulness with autistic children.

The Merrill-Palmer Scale was standardized on a total of 631 boys and girls. The reliability of the Merrill-Palmer Scale is not recorded in Stutsman's 1931 manual. Validity of the scale was determined through comparisons with other similar measures and by the fact that the

Merrill-Palmer Scale could differentiate between normally developing children and those with developmental delays.

The Leiter International Performance Scale. One child was tested for mental age using the Leiter Scale (Leiter & Arthur, 1969). This scale is similar to the Merrill-Palmer Scale in that it was designed to be administered non-verbally. In addition to its usefulness for persons who have language disabilities, the Leiter Scale has also been shown to be appropriate for persons with fine motor and manipulative difficulties (Matey, 1984).

The Leiter Scale is intended for persons aged two to eighteen years. Matey (1984) reports that its test-retest reliability has been shown to range from low ($r = .36$) to moderate ($r = .63$). Validity studies have been concerned with comparisons to other intelligence scales. Matey (1984) suggests that, overall, the Leiter compares favourably with other tests of intelligence such as the Wechsler.

The Parenting Stress Index

Description. The Parenting Stress Index (PSI) (Abidin, 1986) was used to measure the amounts and sources of stress for the participant parents. Each parent was asked to complete the self-report questionnaire apart from their respective spouse. The PSI yields a Total Score, scores for Parent and Child Domains, as well as scores for seven subscales of the

Parent Domain and six subscales of the Child Domain. These various parts of the PSI are described in the following sections along with reliability and validity measures. One aspect of the PSI, an optional Life Stress list, was not used in this research.

The content of the PSI was generated through review of research in the fields of infant development, parent-child interaction, attachment, child abuse and neglect, child psychopathology, childbearing practice, and stress (Abidin, 1986). The author combined his clinical experience with the information generated in the literature review to draw up a comprehensive list of dimensions and items to assess these dimensions. Pilot tests took place to check the relevancy and readability of the items. Finally, a panel of six experts in the field of early parent-child relationships rated all items for content and relevance. The initial instrument contained 150 items which were pared down to 101 after more field testing. Ninety-five percent of the items of the PSI can be directly traced to specific research findings.

The Child Domain of the PSI consists of the following six subscales:

1. Child Adaptability/Plasticity: assesses the ability to adjust to changes in the physical or social environment (11 items).

2. Acceptability of Child to Parent: assesses the degree to which the child's physical, intellectual, and emotional characteristics match the parent's expectations (7 items).

3. Child Demandingness: assesses the degree to which the parent experiences the child as placing many demands on him or her (9 items).

4. Child Mood: assesses the child's affective functioning (5 items).

5. Child Distractability/Activity: assesses the parent's perception of the child's level of activity and concentration (9 items).

6. Child Reinforces Parent: assesses degree to which the parent experiences the child as a source of reinforcement (6 items). (McKinney & Peterson, 1984, p. 506)

The Parent Domain consists of the following seven subscales:

1. Parent Depression: assesses feelings of guilt, unhappiness, and depression (9 items).

2. Parent Attachment: assesses emotional closeness to the child and ability to understand the child's feelings and/or needs (7 items).

3. Restrictions Imposed by Parental Role: assesses degree to which parent experiences parental role as restricting freedom and frustrating their attempts to maintain their identity (7 items).

4. Parent's Sense of Competence: assesses the parent's perceived degree of competence in fulfilling the parental role (13 items).

5. Social Isolation: assesses the degree of isolation from peers, relatives, and other emotional support systems (6 items).

6. Relationship with Spouse: assesses emotional and active support in the relationship (7 items).

7. Parental Health: assesses general health of the parent (5 items). (McKinney & Peterson, 1984, p. 506)

Standardization. The PSI was originally normed on a group of 534 mothers attending clinics in Virginia, U.S.A. Their children included both "normal" children and children with health or behavioral problems. Ninety-two percent of the mothers were white, 13% of them were employed fulltime and 31% were employed parttime. Eighty-five percent of the mothers were married, 21% had community college training and 37% had a university education. The husbands of these women were mostly employed fulltime (90%). Husbands' education levels were quite similar to their wives' levels of education. Mean age for the mothers was 29.8 and for their husbands, 31.6 years. The children who were the focus of the PSI norm group ranged in age from one month to 19 years, with a mean age of 14 months (standard deviation of 23.2 months). A separate norming for fathers was done with

100 fathers. Little information is given about these men, except that 95% of them were caucasian and their children's mean age was 15.6 months (standard deviation of 3.3 months).

Reliability. Reliability levels of the PSI have been determined through a variety of means. These are listed in Table 1 which is a reproduction with additions of a table given in the PSI Manual (Abidin, 1986). Two sets of alpha reliabilities are listed in Table 1 because two reliability studies were carried out by the author. One of these was a cross-cultural validation study. The test-retest coefficients listed in Table 1 resulted from four separate studies. Burke, 1978, cited by Abidin, 1986, obtained coefficients of .817 for the PSI Child Domain and .706 for the Parent Domain when 15 mothers were tested and retested. Abidin, 1986, readministered the PSI to 30 mothers who were part of the original norming group for the PSI. One to three months later, coefficients of .63 for the Child Domain, .91 for the Parent Domain, and .96 for the Total score were obtained. Zakreski, 1983, cited by Abidin, 1986, obtained coefficients of .77 for the Child Domain, .69 for the Parent Domain, and .88 for the Total score when testing and retesting 54 parents over a three month interval. Finally, Hamilton, 1980, cited by Abidin, 1986, obtained coefficients of .55 for the Child Domain, .70 for the

Parent Domain, and .65 for the Total score when 37 mothers were tested and retested one year apart.

Insert Table 1 about here

Validity. Content validity has already been addressed in the description of the development of the PSI. The author addresses other types of validity and these are summarized in the following section.

In terms of concurrent and construct validity (demonstrated by showing that test scores are positively correlated with alternative measures of the same construct), the authors cite a variety of research to support their claim that the PSI is valid. The PSI has been significantly and positively correlated with the Child Behavior Problem Checklist (no correlation coefficient given) (Quay & Peterson, 1979 cited by Abidin, 1986), the State-Trait Anxiety Scale (r = .68) (Spielberger, 1970 cited by Abidin, 1986) the State-Trait Anxiety Index (r for Trait = .84, r for State = .71) (Jenkins, 1982 cited by Abidin, 1986), and the Achenbach Child Behavior Checklist (r for PSI Parent Domain = .40, r for PSI Child Domain = .56) (Casey, 1983 cited by Abidin, 1986). In addition, the author cites a series of twelve other studies where the PSI has been correlated with measures of different aspects of parental stress. For these studies, the samples ranged from "normal"

children to children with serous otitis media, to hyperactive and learning disabled children.

In terms of discriminant validity (demonstrated by showing that the test scores are more highly correlated with certain criteria than with others, thus enabling a researcher to differentiate groups with different characteristics) the author (Abidin, 1986) again offers much evidence for the validity of the PSI. Nineteen studies are listed showing that the PSI was able to differentiate a variety of clinical subgroups from the normative population. The subgroups included parents who were abusive, parents who had received perinatal coaching, and parents who were at risk for a variety of reasons. The clinical subgroups included children with feeding problems, cerebral palsy, mental retardation, traumatic injury, hyperactivity, spina bifida, developmental delays, autism, and others.

Of the studies listed to support discriminant validity, those related to the differentiation of families with mentally handicapped children from "normal" families are of interest for this research. For all of the studies which are discussed in this section, the stress scores obtained by the parents of children with handicapping conditions were higher than those obtained by the control group or the PSI norms. In research with children with cerebral palsy and a matched control group, the PSI was able to distinguish higher stress scores in

the Child Domain subscales as well as some Parent Domain subscales such as Social Isolation (Zimmerman, 1979, cited by Abidin, 1986). A study of mentally handicapped children (Greenberg, 1983 cited by Abidin, 1986) showed that the PSI could discriminate the families with a mentally handicapped child from the norm population of the PSI, especially in the Child Domain subscales. A similar result was found when children with severe developmental delays and feeding problems were studied (Saviano, 1981 cited by Abidin, 1986). A study which looked at mentally handicapped, learning disabled, emotionally disturbed and a control group of nursery school children found that the Child Domain subscales of the PSI significantly discriminated between the groups (Jenkins, 1982 cited by Abidin, 1986). McKinney and Peterson (1987) found that the PSI Child Domain scores were significantly different from the PSI standardization sample for parents of children with developmental delays.

Validity for the PSI has also been supported by factor analysis using varimax rotation criteria. When analyzed as a group, the six subscales of the Child Domain accounted for 41% of the variance. The seven subscales of the Parent Domain accounted for 44% of the variance. When the Child Domain and the Parent Domain were analyzed, the two factors accounted for 58% of the variance. The author (Abidin, 1986) concluded that the

subscales were measuring moderately distinct sources of stress.

Suitability of the PSI. The appropriateness of the PSI for this research is related to its standardization, validity and reliability. The norm group for the PSI standardization is similar to the parent group which participated in this study. As can be seen from the information above, the ages of the parents and their education levels are fairly similar with the standardization group being slightly younger and having a larger percentage of university graduates. More mothers in the sample group were employed outside of the home either full or parttime than in the standardization group. The children of this research project were somewhat older than the mean age of the children in the standardization group. Probably the most significant difference between the families of this research project and the families in the norm group is that the group of parents represented in this study had children with mental handicaps.

The reliability of the PSI as reported by the author (Abidin, 1986) is moderate to good for the subscales and very good for the two domains and the total score (see Table 1). This would indicate that some caution should be used in interpreting results of the subscales. Statistically significant results obtained on individual subscales would need to be confirmed by literature review

or replication studies. Since the PSI measures the interaction between two dynamic and changing persons--the parent and the child--it might be asssumed that high reliability over time would be difficult to maintain.

The development of the PSI shows that it has a high degree of content and construct validity. The test manual contains the results of numerous studies listing the strong correlation of the PSI with other measures of parental stress. The PSI has been criticized (McKinney & Peterson, 1984) because it measures both stressors (such as Child Distractability) and stress reactions (such as Parent Health). While this is very important from a theoretical standpoint, in a more clinical and exploratory study such as this one, the collection of data on all aspects of stress is important and useful. Also, the fact that the PSI takes into account both parent and child factors is important to a well-rounded study of stress within a family.

As concerns discriminant validity, the PSI has been shown to differentiate special populations from the norm group of parents. Specific to this study, the PSI has been shown to identify parents in terms of significantly higher stress scores as a function of raising a handicapped child (Mott, Fewell, Lewis, Meisel, Shonkoff, & Simeonsson, 1986). Thus, the PSI has both a history of being used with special populations as well as an ability

to demonstrate differences between the special groups and the norm group.

The use of the PSI to discriminate differences between mothers and fathers of mentally handicapped preschoolers appears to be a new usage for the test. The PSI was normed originally on a group of mothers although a set of norms for fathers has been produced. However, these two norm groups do not represent mothers and fathers of the same children and should not be set side by side for comparison without some caution. It was hoped that the PSI would prove effective in showing differences between parents in the ways described by the hypotheses of this research.

The Coping Health Inventory for Parents.

Description. The Coping Health Inventory for Parents (CHIP) (McCubbin, McCubbin, Nevin, & Cauble, 1983) was used to assess parental coping patterns. It was "developed to assess parents' perceptions of their response to the management of family life when they have a child member who is seriously and/or chronically ill" (McCubbin, 1987, p. 175). (The designation of seriously and/or chronically ill children includes those children with disabilities or handicaps.) The authors of the CHIP were guided in the construction of this 45 item self-report questionnaire by what parents had reported to them about their coping behaviors. Additional items were developed through reviewing the literature focusing on

social support theory, family stress theory, theories of individual psychology of coping, and family health care support. Initial testing of the CHIP resulted in paring the original 80 items to the current 45 items. Each item is a statement describing how a person might cope with a difficult situation. Respondents are asked to record how helpful the behavior is (on a scale of 0 to 3). For this research, mothers and fathers were asked to individually fill out the questionnaire.

The CHIP contains three scales describing three coping patterns defined as follows in the manual:

> The first coping pattern is composed of 19 behaviors that focus on strengthening family life and relationships, and the parents' outlook on life with a chronically ill child. Coping Pattern I is called Family Integration, Co-operation and An Optimistic Definition of the Situation.
>
> Coping Pattern II consists of 18 items which involve the parents' efforts to develop relationships with others, engage in activities which enhance feelings of individual identity and self worth plus behaviors to manage psychological tensions and pressures. Coping Pattern II is labeled Maintaining Social Support, Self Esteem and Psychological Stability.
>
> Coping Pattern III contains eight behaviors directed at the parents' relationships with health

care professionals and other parents of chronically ill children. These behaviors include developing more knowledge and understanding of the illness, and mastering any home care treatments and prescribed medical regimens. Coping Pattern III is designated as Understanding the Health Care Situation Through Communication with Other Parents and Consultation with the Health Care Team. (McCubbin, 1987, p. 176)

Standardization. The CHIP was developed using a sample of 185 parents (90 fathers and 95 mothers) of children with cystic fibrosis. In order to establish norms, 308 parents (mothers and fathers) of children with cerebral palsy or cystic fibrosis were tested. This group provided mother and father mean scores and standard deviations for the CHIP norm tables which can be used for comparisons with other groups of parents with children with similar or different conditions. Unfortunately no other information is given about the norming group of parents, thus making it impossible to compare them with the parents who participated in this study.

Reliability. In terms of reliability, the CHIP manual (McCubbin, 1987) lists only Cronbach's Alphas for each of the scales. These reliabilities of .79, .79, and .71 respectively for Coping Patterns I, II, and III were obtained from a sample of 185 parents of children with cystic fibrosis. Factorial validity was established

through use of the Varimax criterion and indicated that the three patterns represented 71.1% of the variance.

Validity. In terms of discriminant and construct validity, the authors cite evidence of research showing that the CHIP differentiated between high conflict and low conflict families with children with cerebral palsy. The high conflict families had significantly higher scores for all three coping patterns. This fit the author's model which suggested that coping behaviors develop when families experience more stress.

The manual for the CHIP also offers evidence from studies carried out by the authors which have shown that the CHIP was significantly correlated with the Family Environment Scale (Moos, 1976) for families with children with cystic fibrosis. The authors hypothesized that the coping patterns described by the three CHIP scales would be associated with dimensions of the family environment. For the 95 mothers who participated, coping patterns I ($r=.21$, $p<.01$) and III ($r=.19$, $p<.05$) were positively associated with family cohesiveness. Coping pattern II was positively associated with family expressiveness ($r=.19$, $p<.05$). For the 90 fathers who participated, coping pattern I was positively associated with family cohesiveness ($r=.36$, $p<.01$) but negatively related to family conflict (($r=-.21$, $p<.05$). Coping pattern I was also positively associated with family organization ($r=.32$, $p<.01$) and the third coping pattern was

positively related to both family organization ($r=.22$, $p<.05$) and family control ($r=.19$, $p<.05$) for the fathers.

The authors of the CHIP offer summaries of 22 studies which used the CHIP (McCubbin, 1987). Significant to this research, 15 of the studies reported both mother and father data. At least nine of the 22 studies listed included parents of autistic, mentally handicapped or multiply handicapped children. The groups of parents represented by these studies were shown to cope in different ways than the norm group. For example, parents of multiply handicapped children had lower mean scores on the Coping Pattern III but higher scores on Coping Pattern II than the norm group (Murray, 1983, cited by McCubbin, 1987). In other research, (Schwab, 1985, cited by McCubbin, 1987) fathers of children with physical and mental handicaps reported significantly more coping behaviors related to family integration (Coping Pattern I) than did mothers. Fathers also reported more investment in their work outside of the home as a coping strategy, whereas, mothers reported stronger coping patterns associated with individual and social support (Coping Pattern II). In another study (Herron, 1985 cited by McCubbin, 1987), it was found that mothers of autistic children reported greater use of the coping strategies suggested by Coping Pattern II than did fathers. This research also found that Coping Pattern I was positively associated with marital adjustment for

both mothers and fathers. Other results cited by the authors concerned families with children with cystic fibrosis, with cancer or terminal illnesses, with diabetes, and other physical impairments. The authors were aware of 500 requests for the CHIP from 1981 to 1984 showing it to be a well accepted clinical and research tool.

Suitability of the CHIP. The appropriateness of the CHIP for this research is based on its accepted usefulness in measuring mother and father differences in coping in families with children with handicapping conditions. Alpha reliabilities and factorial validity are moderately good. This would suggest that some care would need to be taken in generalizing from the CHIP results. Nevertheless, the development of the CHIP was based on a wide range of research in the field of coping and it appears to correlate positively with family outcome measures. It would be helpful if the authors published more information on the norm population and if they produced test-retest reliabilities.

The Social Support Inventory

Description. The Social Support Inventory (SSI) (McCubbin, Patterson, Rossman, & Cooke, 1982) was used to measure the differences in reported social supports for mothers and fathers. It is a self-report measure which mothers and fathers were asked to complete separately. The SSI was created to measure five kinds of social

support and 12 sources of support. There are thus 60 items on which respondents can report whether they received support from that source in terms of "no", "yes", and "yes a lot".

The SSI was developed based on research in the field of family stress. Social support is considered to be one coping resource which affects a family's adjustment to stress. The authors of the SSI were concerned with measuring both quality and quantity of social support and wished to ensure that a new measure of social support would include both kinds and sources of social support, dimensions not clearly included in previously produced measures of social support (Cooke, Rossmann, McCubbin, & Patterson, 1988). With this in mind, 11 couples (three expecting their first child and eight first time parents of children aged 3 to 24 months) were extensively interviewed about all the sources and kinds of support they received. These taped interviews were then analyzed to determine categories of sources and kinds of support. Experienced researchers refined the categories and all of the parents' responses were classified on the basis of the defined categories. The twelve sources of support which were categorized include spouse or partner, children, other relatives, close friends, co-workers, community or neighbourhood groups, church or synagogue, professionals or service providers, special groups, television or radio or other printed media, spiritual

beliefs, and other. The five types of support were defined as follows:

> Emotional Support: Information which leads you to believe that you are cared for and loved as a person.
>
> Esteem Support: Information which leads you to believe that you are valued and respected for who and what you are and what you do.
>
> Network Support: Information which leads you to believe that you receive a sense of trust and security from belonging to a group to whom you are also obligated.
>
> Appraisal Support: Information which provides you with feedback about how you are doing and ideas for resolving difficulties.
>
> Altruistic Support: Information which leads you to believe that you are worthwhile because of what you have done with and for others. (Cooke et al., 1988, p. 213)

Standardization, Reliability, and Validity. The SSI is a relatively untried measure since its development. Norms were developed from the results of testing with 118 parents participating in a parent education program for preschool aged children. No other information is given about these parents in the scoring instructions for the SSI.

Reliability of the SSI was measured on two occasions. Test-retest reliabilities were .81 after one week for a group of 13 parents who had similar characteristics to the couples in the original interview group and .79 for a group of 18 educators. Validity, as concerns the development and the content of the SSI has been discussed above. A further test of the validity of the SSI took place when the 22 parents who were originally interviewed to develop the content of the SSI were given the newly developed SSI to complete. Two family life professionals were able to match with 80% accuracy the responses on the SSI with the transcriptions of the interviews. According to Cooke et al., 1988, this indicated that the statements in the interviews were captured by the SSI.

Suitability of the SSI. The SSI is an appropriate measure for this research project because its content takes into account both the quality and quantity of social support as well as sources and types of social support. This emphasis of the SSI's content is supported in the literature (Cobb, 1982). The SSI has adequate reliabity coefficients and was normed on a group of parents with preschool aged children. One problem asssociated with the SSI is the inadequate information in the instructions about the norm group and the lack of separate norms for mothers and fathers (the term "parents" is used). Also, the SSI is an instrument which

has not been used often enough to fully support its utility in the measurement of social support.

Data Analysis

First Hypothesis

In order to determine whether mothers and fathers reported statistically significant differences in their stress scores, the Total Score, the two Domain Scores and the eleven subscale scores from the Parenting Stress Index were analyzed using the SYSTAT (Wilkinson, 1989) MANOVA operation. More specifically, the Hoteling's T-squared statistic was used for determining whether results were statistically significant ($p < .05$). In a design where several dependent measurements have been used with the subjects, the Hoteling's T-test is preferable to doing several univariate t-tests which would result in compounded error rates. The T-Squared test is a multivariate t-test and yields probability scores for all of the individual variables (univariate analysis) entered as well as the variables in combination (multivariate analysis).

The second part of the first hypothesis stated that fathers of boys would report higher levels of stress than fathers of girls. Since the Hoteling's T-test shows only that compared scores are different, the statistical significance of this hypothesis was measured using one-tailed t-tests with statistical significance set at .05.

The one-tailed t-tests allow for the testing of a directional hypothesis.

Second Hypothesis

The differences between mothers and fathers and their coping strategies and social supports were tested using the Hoteling's T-Squared analysis as described above. The five kinds of support and twelve sources of support defined by the Social Support Inventory were analyzed along with the three subscales of the Coping Health Inventory for Parents.

Correlations

Simple correlational procedures were used to analyze the relationships of stress with coping and supports for both mothers and fathers. Correlations present another view of the differences between the sample mothers and fathers.

Chapter V

Results

Introduction

Two hypotheses were stated for this research. Results are reported for each hypothesis in terms of descriptive statistics followed by inferential statistics. Whenever possible, norms for the questionnaires are compared to the sample results. In a final section, correlations of stress variables with coping and social support variables are examined as another way of viewing mother and father differences. The chapter begins with a description of the sample of participating parents and their children.

Description of the Sample

Parents

A summary of specific information about participant parents is given Table 2.

Insert Table 2 about here

All parents were caucasian. The mean age for participant fathers was 33.5 years and for mothers, 31.19 years. In terms of socioeconomic status (SES) categories (Hollingshead, 1975), four families were in the Major Business and Professional category; five families were in the Medium Business and Minor Professional, Technical

category; six families in the Skilled Craftsmen, Clerical, Sales category; and one family in the Machine Operators, Semi-skilled category. The Hollingshead measure of socio-economic status also takes into account the education level of the parents. In this sample group, 31% of mothers and 38% of fathers had a community college education, and 25% of mothers and 31% of fathers had university educations. For mothers, 43% had high school level or less education compared with 32% of fathers having high school or less education. All fathers were employed fulltime.

Children

Specific information about the mentally handicapped children whose parents participated in this study is summarized in Table 3.

Insert Table 3 about here

There were 9 girls and 7 boys in the study. The mean chronological age of the children was 45 months with the mean age for girls being 44 months and the mean age for boys being 47 months. A mean mental age for the children was difficult to process since three of the children were tested using scales other than the Bayley Infant Scales. Two of those children tested using the Bayley also obtained the ceiling score. With this in mind, only approximate means for mental age could be

produced. The mean mental age for all of the children was approximately 21 months. For the boys, the approximate mean mental age was 18 months and for the girls, 24 months. It is important to note that the boys in the study were older chronologically but their mental ages were lower overall than that of the girls.

The First Hypothesis

Introduction

The first hypothesis stated that mothers and fathers of mentally handicapped preschoolers would report differences in the stress they experienced, and that fathers of boys would experience greater stress than fathers of girls. The results from the Parenting Stress Index (PSI) were used to assess the first hypothesis. Statistical procedures included Multiple Analysis of Variance (MANOVA) and t-tests to obtain means, standard deviations, and probabilities for differences between mothers and fathers. As stated previously, the statistical significance levels for the MANOVA procedures was set at .05.

Comparisons of Mothers' and Fathers' Reported Stress

Descriptive statistics. The Parenting Stress Index (PSI) (Abidin, 1986) was the principal questionnaire used to discover the amounts and sources of stress experienced by parents. The PSI includes two domains--the Child Domain with six subscales and the Parent Domain with seven subscales. The scores from these two domains can

be summed to obtain a total stress score. The means and standard deviations for the full PSI battery are summarized in Table 4 for the mothers and fathers as well as for the norm population.

Insert Table 4 about here

Generally, the parents who participated in this study scored higher on the PSI than did the norm population (see Table 4). This is consistent with the Abidin's (1986) observation that parents of children with disabilities would obtain higher scores on the PSI than the norm parents whose children were not handicapped. Table 4 also shows that for both domains, the total score and most of the subscales, fathers in the sample scored lower than mothers. (Some of these differences in scores were statistically significant and will be discussed in a later section.) The fact that mothers scored higher than fathers indicates that, on the whole, mothers experienced higher levels of stress than fathers. This is consistent with the PSI norms (Abidin, 1986).

According to Abidin (1986), scores different from the norm are of concern if they fall outside of the 15th to the 80th percentile. Neither fathers nor mothers scored below the 15th percentile on any part of the PSI, but there were a number of instances where scores were in the high range. Both mothers and fathers scored in the

high range (above the 80th percentile) for the PSI Child Domain, but only the mothers scored in the high range for the total PSI score. Both mothers and fathers obtained scores in the acceptable range (between the 15th and 80th percentiles) for the Parent Domain. Table 4 also lists three subscales, Acceptability of the Child, Child Demandingness, and Child Reinforces Parent, where mothers and/or fathers scored in the high range.

Inferential statistics. In order to determine whether mothers and fathers from the sample group differed significantly from each other on the stress variable, a variety of MANOVA operations were performed. Mother and father scores on the PSI Child and Parent Domains, the six subscales of the Child Domain and the seven subscales of the Parent Domain were compared.

In a design where several measurements have been made on the same subjects, the MANOVA operation is preferable to performing several t-tests or ANOVAS. The MANOVA does not compound errors or inflate p values as happens when several t-tests or ANOVAS are performed. The statistical procedure used for these analyses is called the Hotelling's T-Squared. It is actually a multivariate t-test useful for comparing the means from more than one dependent measure. It produces a multivariate F statistic and probability level for all of the dependent measures in combination and a univariate F

and probability for each of the dependent measures on its own (equivalent to a oneway ANOVA or a t-test).

The first analysis was a comparison of mother and father scores for the PSI Child Domain subscales in combination (Adaptability, Acceptability, Demandingness, Mood, Distractibility, and Child Reinforces Parent). This procedure is different from a comparison of mother and father Child Domain scores because it takes into account the scores from six tests rather than the single Child Domain score. None of the multivariate or univariate F statistics proved to be statistically significant. These mothers and fathers were probably not experiencing differences in the stress associated with their children's characteristics.

The second analysis compared mother and father scores on the seven combined subscales of the PSI Parent Domain (Depression, Attachment, Role Restriction, Sense of Competence, Social Isolation, Spouse, and Health). The multivariate analysis indicated that for the seven subscales in combination, mother and father scores were significantly different, $F(7, 24) = 2.698$, $p = .033$. When looked at univariately, differences in scores on two subscales also approached statistical significance. These subscales were Restrictions on Role, $F(1, 30) = 3.449$, $p = .073$ and Parental Health, $F(1, 30) = 3.890$, $p = .058$.

It is noteworthy that the mothers scored higher than the fathers on the Parent Domain as a whole (and on most of the seven subscales of this domain). The interpretation guide to the PSI (Abidin, 1986) indicates that the higher the score on a Domain or subscale the greater the stress associated with that area. Thus, the mothers reported greater amounts and sources of stress related to their functioning as parents than fathers reported.

Summary. To summarize, the first hypothesis that mothers and fathers would report differences in terms of stress has been partially born out. Both mothers and fathers indicated that they experienced higher stress than the norm population of the PSI and both reported high stress related to their children's characteristics (as indicated on the subscales of the PSI Child Domain). However, in terms of the dimensions suggested by the Parent Domain of the PSI, mothers reported overall higher scores than fathers and the differences were statistically significant.

Stress for the Fathers of Boys

Descriptive statistics. The second part of the first hypothesis stated that stress would be greatest for fathers if the child was a boy. The total number of subjects for the statistical procedures was sixteen fathers (seven fathers of boys and nine fathers of girls). The means and standard deviations obtained on

the PSI domains, subscales and total scores for these two groups of fathers are recorded in Table 5.

Insert Table 5 about here

Table 5 indicates that the fathers of boys scored higher than the fathers of girls on most of the subscales of the PSI. In addition, the fathers of boys scored in the high range for the full Child Domain and on four subscales of the Child Domain (Adaptability, Acceptability, Demandingness, and Child Mood). Fathers of girls scored in the high range on only one subscale of the Child Domain (Acceptability).

Inferential statistics. In order to determine on which of the subscales of the PSI Child and Parent Domains the fathers of boys scored significantly higher than fathers of girls, the two sets of scores were compared using one-tailed t-tests. On one subscale, Child Distractability, the difference between the two groups of fathers was statistically significant, $t(14) = 1.829$, $p = .045$, one-tailed. On the PSI Child Domain Total, the difference between mean scores approached significance, $t(14) = 1.725$, $p = .054$, one-tailed. On two other Child Domain subscales, the difference in means also approached statistical significance. These subscales were Child Demandingness, $t(14) = 1.461$, $p = .083$, one-tailed, and Child Mood, $t(14) = 1.468$, $p =$

.082, one-tailed. On two Parent Domain subscales, Parent Depression, $t(14) = 1.691$, $p = .057$, one-tailed, and Parent Sense of Competence, $t(14) = 1.462$, $p = .083$, one-tailed, the difference between fathers of boys and fathers of girls also approached statistical significance. For all of these subscales except Parent Depression, fathers of boys reported more stress than fathers of girls.

Summary. The second part of the first hypothesis stated that within the group of sixteen fathers there would be higher stress if the child was a boy. The results listed above show that for the sample group, the variable of Child Sex was of limited importance to understanding a father's stress. Fathers of boys scored in the high range on more parts of the PSI than fathers of girls, but the differences in scores were not statistically significant except for the subscale Child Distractability. It appears that the boys in this sample were more distractable for their fathers than the girls but otherwise the fathers of boys did not report higher stress.

The Second Hypothesis

Introduction

The second hypothesis stated that mothers and fathers would report differences in coping strategies and social supports. The results of two different

questionnaires were used to assess this hypothesis and will be reported on in the following sections.

Comparisons of Mothers' and Fathers'Coping

Descriptive statistics. The Coping Health Inventory for Parents (CHIP) was the principal means of obtaining information about mother and father coping patterns. The CHIP includes 45 items/questions which divide into three separate subscales. Scores are not combined into a total score. The three subscales denote three ways of coping with stress. The first coping pattern (I CHIP) is associated with behaviors centered around doing things as a family, maintaining family relationships and an optimistic outlook. The second coping pattern (II CHIP) deals with more individualized efforts to maintain personal well-being and enhance self-esteem through involvement in social activities. The third coping approach (III CHIP) involves attempting to understand the medical situation and communicating with other parents. Table 6 lists the means and standard deviations obtained by the parents involved in the present study as well as the norms for the three coping patterns.

Insert Table 6 about here

Table 6 shows that mothers scored higher than fathers on all three factors of the CHIP. When both parents' scores are compared to the norms, it appears

that the utilization of the first and third coping strategies by the sample parents was less than that of the norm group. However, the sample parents seemed to utilize the second coping strategy more than did the norm group. Thus, it appears that an individualized and personal style of coping was somewhat more important for the sample families than coping strategies centred around the family or communication with other parents or medical personnel.

When the 45 items of the CHIP were examined to see which items were chosen most often by mothers and most often by fathers, additional differences emerged. For the 16 mothers in this study, the five most useful individual coping strategies were (in order) (a) trusting my spouse to help support me and my child(ren), (b) building a closer relationship with my spouse, (c) doing things with my children, (d) talking over personal feelings and concerns with spouse, and (e) being able to get away from the home care tasks and responsibilities for some relief. For the 16 fathers in the study group, the most useful coping strategies included (a) talking over personal feelings and concerns with spouse and (b) doing things with my children (tie score), (c) trying to maintain family stability and (d) building a closer relationship with my spouse (tie score), and (e) doing things together as a family (involving all members of the

family) and (f) investing myself in my child(ren) (tie score).

Parental coping could also be examined in terms of the coping strategies parents found least helpful. For the mothers and fathers these included (a) taking good care of all the medical equipment at home, (b) purchasing gifts for myself and/or other family members, and (c) eating. Coping scores on the SSI could also be examined in terms of the strategies where discrepancies between the mother and father scores were largest. These included (a) allowing myself to get angry (total of father scores = 13, total of mother scores = 27), (b) talking with the medical staff (nurses, social worker, etc.) when we visit the medical center (total of father scores = 17, total of mother scores = 30), (c) reading about how other persons in my situation handle things (total of father scores = 10, total of mother scores = 23), (d) becoming more self reliant and independent (total of father scores = 17, total of mother scores = 30), and (e) talking with the Doctor about my concerns about my child(ren) with the medical condition (total of father scores = 20, total of mother scores = 31).

Inferential statistics. The three CHIP scales were examined using the MANOVA test (described in the results section for the first hypothesis) in order to ascertain differences between mothers and fathers. The results are summarized in the following section.

The Hotelling T-Squared result for the three CHIP scales in combination (multivariate analysis) showed that the differences in the means for mothers and fathers approached statistical significance, $F(3, 28) = 2.657$, $p = .068$. The third coping strategy showed a statistically significant difference between mothers and fathers, $F(3, 28) = 5.803$, $p = .022$, when the three strategies were looked at separately (univariate analysis). It appears, then, that the mothers who participated in this study differed from their husbands in that they more often utilized a coping strategy which attempts to understand the medical situation through communication with other parents and consultation with medical personnel.

Comparisons of Mothers' and Fathers' Social Supports

Descriptive statistics. In order to discover differences between mothers and fathers in terms of the supports they used, both parents filled out the Social Support Inventory (SSI). This questionnaire looks at supports in terms of a) types of support (emotional, esteem, network, appraisal, altruistic) and b) sources of support (spouse, children, relatives, close friends, co-workers, church/synagogue, spiritual faith, community groups, professionals, social groups, books/TV and other). Table 7 lists mother and father mean scores and standard deviations as well as norms provided by the authors of the SSI.

Insert Table 7 about here

The first part of Table 7 summarizes the data on the five kinds of support. Generally, the parents in this study reported receiving slightly less support than the norm parents. The mothers in this study reported receiving slightly more support than the fathers. For the test group as well as the norm group, altruistic support (doing something for others as a means of giving and receiving support) obtained the highest mean score of the five kinds of support.

In terms of sources of support, scores were quite similar for both mothers and fathers when compared with the norm group. As with the norm group, the spouse provided the most support for both mothers and fathers. For mothers, close friends came second to spouse as a source of support. The second greatest source of support for fathers was their children. For mothers, the three succeeding sources of support were their children and relatives (tie scores) and professionals. For fathers, the next three greatest sources of support were relatives, and close friends and co-workers (tie scores). Least support (except for "other") for both parents came from TV or books and the various extra-familial groups listed.

Inferential statistics. The five types of support were analyzed in combination using the Hotelling's T-Squared MANOVA. No statistically significant differences between mean scores for mothers and fathers on either the multivariate or univariate tests were obtained. When the twelve sources of support were analyzed, the MANOVA showed that the difference between the means for mothers and fathers on the twelve subscales taken in combination (multivariate analysis) was statistically significant, $F(12, 19) = 2.681$, $p = .027$. On three subscales, Close Friends $F(1, 30) = 9.275$, $p = .005$, Co-workers, $F(1, 30) = 6.509$, $p = .016$, and Professionals $F(1, 30) = 8.055$, $p = .008$, the means for mothers and fathers were significantly different on univariate tests. For one subscale, Church/Synagogue, the difference in means approached statistical significance, $F(1, 30) = 3.307$, $p = .079$. When the mean scores are examined it is notable that mothers found greater support in close friends and professionals than fathers, but for fathers co-workers provided more support. For the majority of the subscales, mothers and fathers tended to utilize the support listed more or less equally. For two subscales, Spouse and Spiritual Faith, the mean scores for both mothers and fathers were the same.

Summarizing the Second Hypothesis

To summarize, some differences in parental coping and social supports have been reported. Mothers and

fathers reported differences in the coping strategies they utilized, with mothers seemingly better equipped with more strategies than were fathers. Mothers tended to cope more than did fathers by consulting with medical personnel and other parents.

In terms of social supports, mothers and fathers tended to rely primarily on each other and on their children. Beyond the nuclear family, mothers tended to garner more support from close friends and professionals than fathers. Fathers found more support in their co-workers than did mothers.

Correlations of Variables

Introduction

The results of the questionnaires administered to parents were correlated in order to view relationships among variables. Of interest was whether correlations of stress scores with social support scores and stress scores with coping scores were different for mothers and fathers. Although these correlations were not specific to the hypotheses, they do present another view of mother and father differences.

Table 8 presents the results of correlating the stress scores (PSI Child Domain, PSI Parent Domain, and PSI Total Score) with coping (I CHIP, II CHIP, and III CHIP) and social support scores (SSI Total Score) for fathers and for mothers.

Insert Table 8 about here

Correlations for Fathers

Table 8 shows a general pattern of negative correlations of stress with coping scores and stress with social support scores for the fathers. Only two correlations were significant ($p < .05$). For parent/father related stress (PSI Parent Domain) there were significant negative correlations with I CHIP (Maintaining family integration) and with the SSI total score. Thus, fathers who scored high for parent related stress reported lowered coping through maintaining family integration and fewer social supports. Conversely, fathers who scored low for parent related stress reported higher coping through maintaining family integration and more social supports.

Correlations for Mothers

Table 8 shows that the correlations for mothers followed a different pattern than for fathers. For mothers, there were more positive correlations than negative ones although only one correlation was statistically significant ($p < .05$). For child related stress (PSI Child Domain) there was a significant and negative relationship with I CHIP (Maintaining family integration). Thus, mothers who reported high child related stress also reported lowered coping using a

pattern of strategies designed to maintain family integration. Conversely, mothers who reported high scores for coping through maintaining family integration also reported lower child related stress.

Summary

There were few statistically significant correlations of stress scores with coping and social support scores for the mothers and fathers who participated in the present research. However, the data does suggest that there were some mother/father differences in the patterns of relationships among these variables. Fathers tended to report negative associations of stress with coping and social supports. Mothers tended to report more positive associations of stress with coping and social supports.

Chapter Summary

This chapter has detailed the results of testing two hypotheses about parental stress, coping, and supports. Generally, the participating mothers and fathers of mentally handicapped preschoolers reported differences in the stress they experienced, but fathers of boys did not report higher stress than fathers of girls (first Hypothesis). These parents also reported differences in terms of the coping strategies and social supports they utilized (second Hypothesis). More specifically, the results can be summarized as follows:

1. Both parents reported high stress in relation to their children's characteristics as seen in the results of the Parenting Stress Index (PSI) Child Domain scores and the PSI total score for mothers. Subscales of the PSI which contributed to these high scores included Acceptability of the child, Demandingness of the Child, and Child Reinforces the Parent.

2. Mothers and fathers were found to be different in a statistically significant way in terms of stress related to their functioning as parents when their scores on the PSI Parent Domain were compared. Two subscales which contributed to this finding, but where differences only approached statistical significance, were Restrictions on Parent Role and Parental Health. On both of these subscales and on the overall Parent Domain score, mothers reported higher stress.

3. Fathers of boys reported high stress as related to their children's characteristics measured on the PSI Child Domain and four subscales (Adaptability, Acceptability, Demandingness, and Child Mood), while fathers of girls reported high stress on only one subscale (Acceptability).

4. Generally, the fathers of boys did not report higher statistically significant stress than the fathers of girls. Fathers of boys reported higher stress on only one subscale of the PSI Child Domain, Child Distractability.

5. Mothers and fathers tended to cope best by relying on each other for support and working at relationships within the family. Relatively strong support was also received from their children, close friends, and relatives. Relatively little support was reportedly received from TV or books, church/synagogue, and community or special groups.

6. Mothers differed from their husbands in a statistically significant way in that they more often utilized a coping pattern which attempted to understand their children's medical situation through communication with other parents and consultation with medical personnel.

7. In terms of specific supports, mothers differed from fathers in a statistically significant way in that they reported more support from close friends and professionals but less support than did fathers from co-workers.

8. Correlational procedures showed that there were differences between the mothers and fathers in terms of the patterns of relationships between stress, social supports, and coping. There were only a few statistically significant correlations for either mothers or fathers. For fathers, parent related stress was negatively correlated with overall social supports and with coping through maintaining family integration. For

mothers, child related stress was negatively correlated with coping through maintaining family integration.

Chapter VI

Discussion

Introduction

The purpose of the present research was to study parent gender as one of the many variables which might be important to the discussion of stress, social supports, and coping with a mentally handicapped preschooler. Results based on questionnaire research with 16 couples showed that there were some differences between the mothers and fathers with respect to stress, social supports, and coping. In this final chapter, the research outcomes are discussed in relation to previous investigations. The limitations of the research are listed and the discussion touches briefly on the research design and the materials utilized. Since the study was motivated by a concern to assist parents, a list of recommendations for practitioners is provided. Finally, recommendations for future research are listed.

Research Limitations

The present study explored some differences between mothers and fathers of mentally handicapped preschoolers in terms of stress, coping strategies, and social supports utilized. The comparison of mothers and fathers from the same families ensured that the subjects were closely matched for SES, age, education level, the mentally handicapped child in their home, and other

characteristics. They differed in terms of what being a mother or father means in each family and on how mothers and fathers (men and women) react when confronted with the need to adapt to a difficult situation--having a mentally handicapped child.

This study was not designed for full stress and coping theory or model testing. Family systems were discussed in the literature review, but an analysis of all the variables that go into a family systems study was beyond the scope of this research. Reference was also made to the McCubbin and Patterson (1981) model of stress and coping. The present study was not intended to prove or disprove their model. Materials produced by these researchers were used selectively along with other materials which have been shown to be useful in studies of stress, coping and social supports.

An important limitation of the present research is that all the subjects were volunteers. As a result, the mothers and fathers who responded to the call for subjects cannot be said to fully represent the population of families with mentally handicapped preschoolers. Firm conclusions about the differences between mothers and fathers of mentally handicapped preschoolers should not be based solely on the present research. A related limitation is that Edmonton is a small and relatively isolated city in which it was difficult to obtain study

participants. This further complicates the issue of the generalizability of the results.

Another limitation of the present research is that it was based on self-report questionnaires. Any self-report measure is subject to defensiveness and social desirability concerns affecting the manner in which parents respond (LaFiosca & Loyd, 1986). Another inherent limitation of questionnaire research is that responses may reflect momentary rather than longterm views into the subjects' lives. The mothers and fathers might have responded differently if they had completed the questionnaires at a different time.

One limitation that is related to part of the first hypothesis (fathers of boys will report higher stress than fathers of girls) is that the sixteen fathers were not a matched sample. Results obtained from comparisons of the fathers must be considered as tenuous because the fathers differed on many more characteristics (such as socio-economic status and age) than just their child's sex.

A final and important limitation of this research is that the questionnaires used to gather information from the parents are imprecise instruments. The alpha and test-retest reliabilities for the PSI and its subscales range from a low of .55 to a high of .96 (see Table 1). CHIP alpha reliabilities are in the moderate range of .71 to .79. For the SSI, test-retest reliabilities range

from .79 to .81 for the full scale. With these generally moderate reliabilities, the results of the present research must be examined with caution and should be confirmed by literature review (or replication if a new finding) before generalizations can be made.

Taking into account all of the limitations listed in the previous section, it would appear difficult to make generalizations based on the data collected for the present research. Nevertheless, there are many reasons to believe that the results of the present research are useful for understanding parents whose children have mental handicaps. These reasons will be outlined in the discussions of both the research design and the research results which follow.

Research Design

Subjects. Sixteen two parent families volunteered to participate in this research project (see Table 2). Even though they were a small group of volunteers and not a random sample, the 32 participating parents represented a mix of ages and some variation in socioeconomic status. The children's ages (see Table 3) all fell within the preschool age bracket, but they represented a wide spectrum of handicapping conditions and development levels. Despite reasonable fear on the part of the researcher that only parents who were least stressed would volunteer for the study, test results showed that the parents who participated were experiencing stress and

in some cases high stress related to their handicapped children. The parents responded with seemingly little defensiveness to questions dealing with their personal reactions to their children. Perhaps, the assurance of anonymity and the premise of the helpfulness of the research for other parents assisted the participants to respond conscientiously. It was also helpful that these families were visited on two or three occasions during which they received some feedback about what they were doing and were given time to discuss their feelings. Much was asked of these parents and they responded with aplomb.

Questionnaires. One of the implications listed for this research was that increased knowledge about the Parenting Stress Index (PSI), the Coping Health Inventory for Parents (CHIP), and the Social Support Index (SSI) would prove beneficial for their authors and for clinicians looking for family assessment tools. The reasons for using these questionnaires are detailed in the Method chapter. The results of this research have shown that all three questionnaires were capable of delineating differences between mothers and fathers. In addition, the parents did not find them exhausting to complete. A number of parents reported during interviews that completing the questionnaires had caused them to reflect on difficult issues and to begin to deal with these issues.

In terms of critique, the CHIP may have been too medically oriented for parents whose children were mentally handicapped but not medically involved. The authors of the CHIP (McCubbin & Patterson, 1981) suggest that modifications can be made. For example, Donovan (1988) changed the third coping strategy to read "understanding the situation through communication with other parents and professionals" in place of the original "understanding the medical situation through communication with other parents and medical staff".

A critique of the SSI would have to include its repetitive format. Since the 12 sources of support are always listed in exactly the same order after each of the five questions, there may have been a tendency to answer in a repetitive manner without attention being given to specifics. Also, the SSI, different from the PSI and CHIP questionnaires, does not have a child or parenting focus. The very general nature of the SSI may not help the assessor to discern whether the parent of a handicapped child is receiving the support he or she needs to deal with child related problems.

Discussion of the Results

Hypothesis One. The first hypothesis stated that mothers and fathers would report differences in the stress they experienced as related to their mentally handicapped children. Also, fathers of boys would report higher levels of stress than would fathers of girls.

Descriptive results and then the results of inferential testing are discussed.

Analysis of descriptive statistics shows that mothers scored higher than fathers on most parts of the PSI. This finding is consistent with the norms published by Abidin (1986). Descriptive statistics also showed that both mothers and fathers scored high (above the 80th percentile) PSI Child Domain scores along with acceptable (between the 15th and 80th percentiles) Parent Domain scores. This implies that it was their children's characteristics and not their personal attributes that were associated with higher stress levels for the parents who participated. Table 4 lists three subscales, Acceptability of the Child, Child Demandingness, and Child Reinforces Parent where mothers and/or fathers scored in the high range. In the interpretation guide to the PSI, Abidin (1986) states that these high scores indicate that the child may not match the parents' "hoped-for child" (p. 42) and may indicate poor attachment or even rejection by the parent. High scores in these subscales probably indicate that the children place many demands on the parents because of their dependency and that they may not respond to their parents in ways that the parents fully understand. Also, these children may be unable to positively reinforce their parents' care efforts.

Results such as those listed above are consistent with the results of previous research (Beckman-Bell, 1981; Wikler, 1981; Wikler, 1986). In these studies, stress has been associated with the demandingness of the care of the mentally handicapped child (especially for mothers), and the discouragement parents encounter each time a normal developmental milestone is not reached by the child.

In terms of comparisons of mother and father stress scores, it was the Parent Domain of the PSI and not the Child Domain which showed statistically significant differences. It can be concluded that mothers and fathers were reacting similarly to their children and that both recognized the difficulties associated with their children. However, mothers and fathers were different in terms of their overall functioning as parents. The data suggests that role restrictions and parental health/stress symptoms were two areas of greatest difference and that both showed higher stress for mothers. Again, these findings are consistent with previous research with families with mentally handicapped children. Dyson and Fewell (1986) noted that mothers felt more limited in their personal growth because of childcare responsibilities. Dunst, Trivette, and Cross (1986) found that mothers reported greater time demands placed upon them by their child than did fathers. Bristol and Gallagher (1986); Gallagher, Beckman, and

Cross (1983); and Parke (1986) found that there was ambiguity about the father's role in the home. Generally, mothers tended to take on the childcare role and most of the increased childrearing tasks associated with a handicapped child. Fathers tended to supply respite, substituting for mother when necessary, but not really having a role of their own. It is not difficult to imagine that mothers would feel more restricted than fathers. Greater concern about health/stress symptoms for mothers is also reported frequently. For example, Dunst, Trivette, and Cross (1986), using a similar questionnaire to the PSI, found that mothers of handicapped children reported poorer emotional and physical health than did their husbands.

The second part of this hypothesis asked whether the fathers of boys would report higher stress than the fathers of girls. Table 5 indicates that the fathers of boys scored in the high range for the full Child Domain and on four subscales of the Child Domain. Fathers of girls scored in the high range on only one subscale of the Child Domain (Acceptability). According to the author of the PSI (Abidin, 1986), a high score on the Child Domain indicates that the child's characteristics are a source of stress for a parent. For the fathers of boys, four subscales (Adaptability, Acceptability, Demandingness, and Child Mood) contributed to that high score. According to Abidin (1986), these high scores

imply that the child does not adjust easily to changes and this can frustrate a parent. The child may also have characteristics which the parent finds difficult to accept. The parent probably experiences the child as being very demanding and the child may not offer the parent positive feedback for his or her efforts at parenting.

Statistically significant differences between the fathers of boys and the fathers of girls were not obtained on most of the PSI except for one Child Domain subscale, Child Distractability. It seems, then, that both groups of fathers experienced their children and their parenting roles similarly, except that the fathers of boys found their sons to be more distractable.

Several reasons can be offered to explain the lack of differences between fathers of boys and the fathers of girls. First, these two groups of fathers may not have reported differences because their children were still quite young. The full meaning of the child and his or her handicap may not have been apparent to these fathes yet. Some of the research which reported higher stress for fathers of boys involved older children than the present research (e.g., Tallman, 1965). Secondly, it may be that having a boy for today's fathers is not as important as it was for previous generations. Studies which showed that the child's sex made a difference for fathers date from the 1960's and 1970's (Burke, 1973,

Price-Bonham & Addison, 1978, Tallman, 1965). Thirdly, because these results were obtained from a small sample of 16 volunteer fathers, there may not have been enough representative subjects in the sample to show significant differences. Finally, an analysis of Table 3 shows that the boys of this sample evidenced greater discrepancies between chronological and mental ages than the girls. It may be that degree of handicap is more important to this question than the child's gender. The more handicapped boys may also have been more distractable.

Hypothesis Two. The second hypothesis stated that mothers and fathers of mentally handicapped preschoolers would report differences in social supports and coping strategies as tested on the Coping Health Inventory for Parents (CHIP) and the Social Support Inventory (SSI). Both descriptive and inferential results are discussed in the following sections.

An important observation about the mothers and fathers who participated in this study is that they were coping and using a large variety of coping strategies. Consistent with the norms published for the CHIP (McCubbin, 1987), mothers reported higher mean scores for the three overall coping patterns (see Table 6). In effect, the mothers were reporting a greater satisfaction and/or use of the 45 individual coping strategies listed on the CHIP than were fathers. Nevertheless, when examined individually, both mothers and fathers reported

that their best coping strategy had to do with trusting or talking with their spouse. Research such as that of Abbott and Meredith (1986) supports this finding. These authors found that the most helpful resource for parents of schoolaged mentally handicapped children was the support of the spouse.

One of the least used coping strategies was that of caring for medical equipment. This probably reflects the fact that the children involved in this research were not in need of a high degree of medical care. It seems a positive sign that two coping strategies not directly related to solving problems (eating and purchasing gifts) were also little used by the participant mothers and fathers.

Some of the larger discrepancies between mother and father scores for the 45 individual coping strategies included getting angry, talking with medical personnel/doctors, reading, and becoming more self-reliant and independent. For all of these, mothers reported greater satisfaction and/or use of the strategy. It is not known whether getting angry motivated the mothers to positive action, but if it led to their becoming more self-reliant and independent, it may have been very useful to them. It could be seen as a positive outcome for mothers with a mentally handicapped child.

As has been previously mentioned, both mothers and fathers found their respective spouse to be their primary

source of support and the one with which they were most satisfied. Sources of support which parents found to be of relatively little satisfaction were, among others, church/synagogue, professionals, TV/books and community groups. Waisbren (1980) also found that formal supports, such as the help of professionals, were not highly esteemed by parents. It is interesting that many professionals (teachers, medical personnel, social workers, therapists) who see their job as supporting families are not highly regarded by the recipients of support. Several explanations of this result are possible. First, it may be that these parents of young children had little experience with supportive professionals. Thus, they may have had little experience of the benefits which could be gained through regular contact with specialists willing to assist them. Secondly, research has shown that professionals may increase parental feelings of ineptitude or put added stress burdens on families by asking too much of them (Benson & Turnbull, 1986). This might negate or counterbalance the help parents may have received from professionals. Thirdly, these parents may not have expected professionals to be supportive in the same ways as a spouse or friend. Parental perception of the professional's role may have had more to do with providing information and training. For example, Bailley and Simeonsson (1988) asked parents what assistance they

needed in relation to their handicapped infant. High scores for both mothers and fathers were obtained on items dealing with a need for information. It can probably be assumed that professionals in various contexts would provide this information and be valued for it. Social support in terms of being loved and valued (as measured on the SSI) may not be a parental expectation of professionals.

For the III CHIP coping pattern, mothers reported higher coping through speaking with medical personnel and with other parents experiencing similar problems than did fathers. This result is similar to that reported on the SSI where mothers reported more support from professionals than fathers. This probably reflects the fact that a primary responsibility for mothers is the basic care (including healthcare) of their handicapped children and that it is mothers rather than fathers who regularly encounter professionals. This pattern of role allocation is confirmed by the research of Gallagher, Scharfman, and Bristol (1984) and Washington and Gallagher (1986). Fathers generally do not take on these responsibilities, ostensibly because of their work commitments. Thus, they often do not benefit from a coping strategy directly related to doing something for their child (eg., taking the child to the doctor) or from the support provided by professionals (Cummings, 1976).

Interaction with other parents is the second aspect of the III CHIP coping pattern on which mothers reported higher scores than fathers. This finding is supported by the research of Bailey and Simeonsson (1988) who found that when parents of handicapped children were asked about their needs, mothers reported a far greater desire than did fathers to meet and talk with other parents of handicapped children.

Another statistically significant finding of this research was that fathers found more support from co-workers than did mothers. This seems to be a reasonable finding since all of the men were working and had access to co-workers with whom to relate. Only half of the mothers were working outside of their homes and thus only half had access to co-workers.

A further statistically significant difference between mothers and fathers was the greater support mothers reported receiving from friends. This finding is consistent with general research on male/female coping differences (Schilling, Schinke & Kirkham, 1985) but it may also reflect the fact that women who are not working outside of their homes may have more opportunities for finding and engaging in this type of support. Stokes and Wilson (1984) concluded that male socialization patterns tend to emphasize autonomy and do not encourage reaching out to form many close relationships. Women, on the other hand, are encouraged to reach out. They learn to

give and receive more from supportive relationships. Astor-Dubin and Hammen (1984) concluded that women tend to turn to a friend when under stress, whereas men tend to cope by withdrawing and using cognitive strategies. A review of the research on coping by Schilling, Schinke, and Kirkham (1985) found that husband support systems tended to be less intimate and heavily weighted with the support of co-workers. Wives tended to rely on close friends for support, often more than on their husbands.

Correlations. Correlations of stress with coping and social support variables (see Table 8) showed different patterns for the mothers and fathers. Generally, the correlations of the fathers' stress with social support and coping scores showed negative relationships. For mothers, the correlations of stress with coping and social support scores were more positive. There were only three statistically significant correlations. These included a) the negative correlation of father/parent related stress (PSI Parent Domain) with I CHIP (Maintaining family integration); b) the negative correlation of father/parent related stress (PSI Parent Domain) with Total SSI scores; and c) the negative correlation of mothers' child related stress (PSI Child Domain) with I CHIP (Maintaining family integration).

It is difficult to explain these patterns and differences between mothers and fathers. Common sense arguments would state that stress should be negatively

correlated with coping and supports (i.e., having many coping resources as well as helpful and available social supports would be associated with having low stress or, conversely, having high stress would be associated with having few coping resources or social supports). This may have been the case for most of the correlations of the fathers' scores and for some of the mothers' scores.

The pattern of negative correlations of stress with coping and supports may not always occur so readily. McCubbin et al. (1980) concluded that some efforts to cope (eg., denying the problem exists) may hinder the development of other, better coping strategies and lead to greater stress. Also, some coping strategies may increase stress if they do not benefit all family members equally (eg., one family member receiving more attention or a higher percentage of income). In another research project, McCubbin et al. (1982) discovered positive correlations of stress with coping and suggested that high stress may actually force a person or family to increase coping strategies to meet the demands being faced. Thus, coping behaviors and patterns would be "expected to be most valued and most apparent in stressful situations" (McCubbin et al., 1982, p. 184) and high stress would be associated with high coping and supports. These explanations might help to account for the more positive correlations of stress with coping and supports for the mothers involved in the present

research. Mothers reported more parent related stress than did fathers (see Table 4) and also reported higher coping scores than fathers (see Table 6) especially on III CHIP (Understanding the medical situation through communication with other parents and consultation with medical staff). Perhaps, the mothers' coping scores were positively correlated with their stress scores because they were more aware of problems/stressors and also more aware of their coping efforts than were their husbands.

As stated previously, the majority of the correlations of mothers' scores were positive correlations. One exception was the negative and statistically significant correlation of child related stress (PSI Child Domain) with I CHIP (Maintaining family integration). It is possible that their children's characteristics as defined by the PSI Child Domain subscales (mood, adaptability, activity level etc.) may have hindered the mothers' ability to cope through maintaining family integration.

Research Conclusions

The following conclusions can be made to summarize the results of this research with 16 couples who had a mentally handicapped preschooler. Despite the limitations listed in a previous section, these conclusions are generally supported in the literature on family stress and coping.

1. Both the mothers and fathers experienced high stress related to their children's characteristics. They both recognized and found it stressful to deal with such things as their children's demandingness, acceptability, and inability to positively reinforce their caregivers.

2. The mothers and fathers differed in terms of the stress related to their functioning as parents. Mothers reported having more role restrictions placed upon them and also experienced more symptoms of stress.

3. Both the mothers and fathers had access to a wide array of coping strategies and to a variety of social supports. In spite of high stress, these parents were coping appropriately.

4. The mothers differed from fathers in that they more often used a coping pattern concerned with receiving support and information from medical personnel, professionals, and other parents.

5. The mothers and fathers relied most heavily on each other for social support. Their children and other relatives were also important. The support they reported receiving from traditional sources of support, such as church/synagogue, or presumed sources of support, such as professionals, TV/books, and community groups, was low.

6. The mothers and fathers differed in their satisfaction and interaction with some social supports. The mothers reported giving and receiving more from close friends and professionals. The fathers reported greater

satisfaction than mothers with support received from co-workers.

Recommendations for Practitioners

Based on the research findings, the following recommendations for professionals working with families with mentally handicapped children can be made:

1. Mother stress, coping, and social supports should be considered as different from father stress, coping, and social supports. "Family" or "parent" programs need to include both mother and father aspects to them. What is beneficial for mothers may not meet father needs. The results of the present research suggest that each parent should be approached from an individualized perspective which is designed to meet his or her specific needs.

Support for this recommendation is provided in an article summarizing the literature on interventions with preschool-aged handicapped children (Carney, 1983). The author discusses a number of assumptions necessary for the optimal relationship of programs and families. The assumptions include the following statements relevant to this discussion:

1. Programs should design their services to provide a range of options for parents and children.
2. Programs should provide each family with a constellation of services suited to its individual needs.

3. Programs should be sufficiently flexible to provide services to both mothers and fathers. (Carney, 1983, pp. 80 & 82)

Further support is provided by Benson and Turnbull (1988). These authors suggest that families with handicapped children be approached from an individualized perspective in the same way as educators have individualized special education programs for children.

In a recent article, Krauss (1990) reports on a new United States federal initiative for services to families with handicapped children. This involves the mandatory development of an individualized family service plan which defines the recipient of service as being the family, rather than the disabled child alone. Whether or not one agrees with the mandatory nature of the legislation, this focus on the family should lead to more specific services designed to meet the needs of individual family members.

2. Initial family assessments must go beyond the assumption of stress in a family with a mentally handicapped child to include a recognition of the coping strategies and social supports mothers and fathers have available to them. If the 16 families who participated in this research had only completed the stress questionnaire, their lives might have appeared to be extremely difficult. The inclusion of questionnaires

concerning coping and social supports allowed them to show that they had resouces to deal with their problems.

The inclusion of coping and social support variables in the discussion of a family's reactions to their handicapped child may help to discourage a focus on family dysfunction and encourage a focus that is more positive. Tulloch (1983) describes a family focus which is developmental, "where parent roles are seen to evolve and change dynamically in response to the multiple demands of their exceptional child and their own lives in the greater society" (p. 57). In a similar vein, Byrne and Cunningham (1985) suggest that focusing on coping "means that families are no longer regarded as passively reacting to stress but as actively manipulating their situation and actively developing coping strategies" (p. 861).

3. Since mothers and fathers seem to rely most heavily on each other for support, it may be fruitful to focus parent training not only on how to deal with handicapped children but also on understanding and meeting the spouse's needs. The role of the professional is probably not to act as a primary support, but to teach parents how to use their own resources to solve their problems.

This recommendation is supported by the work of Dunst and Trivette (in press). These researchers have concluded that the most effective support for a family

comes from sources which are informal and as close to the family as possible rather than from formalized or professional services. Their approach attempts to ensure that a formal "program does not replace or supplant normal socializing agents but rather strengthens them through establishment of linkages that permit needs to be met" (p. 45).

4. The provision of respite services for mothers should be seen as a top priority for any service agency. The mothers who participated in the present research felt strongly the restrictions placed upon them by their caregiving role. Mothers also reported more stress symptoms than did fathers.

This recommendation is supported by the research of Singer, Irvin, Irvine, Hawkins, & Cooley (1989). These authors concluded that respite care was one of the most important support services which could be provided for families of children with developmental disabilities. In addition to respite care, mothers who received training in stress management showed reductions in anxiety and depression that were maintained one year following training.

5. The Parenting Stress Index (PSI), the Coping Health Inventory for Parents (CHIP), and the Social Support Inventory (SSI) all appear to be useful tools for family assessment. The CHIP, with its comprehensive roster of coping strategies/patterns, and the SSI, with

its full listing of potential social suports, could prove useful for focusing discussion on which strategies and supports a parent is using and finds useful.

The utility of the PSI is related to a discussion presented by Beckman-Bell (1981). Beckman-Bell suggested that child related stress could be divided into two categories, including alterable and unalterable characteristics. Unalterable characteristics would include the child's age, sex, appearance, and the etiology of his or her disability. These characteristics must be acknowledged as contributing to a parent's stress, but they cannot be changed. However, alterable characteristics, such as care-giving demands, behavior problems, temperament problems, social responsiveness, and rate of development are amenable to intervention and should be the focus of a discussion about stress. The PSI meets this need to focus on alterable characteristics of the child and family situation. The PSI pinpoints areas of concern on thirteen subscales. These areas of concern are all factors for which potentially helpful interventions are possible. For example, if the results of the PSI were to show that stress for a parent was high on the subscale Child Distractability, a behavior management program might be implemented to change the child's behavior and the parent's responses to it.

Another advantage of the PSI has to do with its norms. Because the PSI was normed with a group of

parents whose children were not disabled, completing the PSI may allow parents of handicapped children the chance to place their experiences with stress in perspective. Some parents may find it possible to acknowledge the high levels of stress with which they live, while others may find that they are not as badly off as they thought.

Recommendations for Future Research

The following recommendations for future research have arisen from the results obtained for this study:

1. Although there is value in highlighting individual variables in the stress and coping process, the study of a family's reaction to their handicapped child needs to be a multivariate process. The present research project has shown that mothers and fathers experience stress and cope in different ways. These differences between fathers and mothers need to be included with the many other variables that influence stress and coping. Continuous updating of research will be necessary as society evolves in the 1990's.

2. The questionnaire approach to the study of a family probably needs to be supplemented by interviews and observations in order to begin to understand more fully the differences that mothers and fathers report. Results obtained on the questionnaires helped to show that differences existed between the spouses, but of interest is also what prompted those differences and perhaps why or how they occurred. Observations of mother

and father roles and their interactions with their handicapped children might increase understanding of family functioning and confirm or deny results based on questionnaires with only moderate reliabilities.

3. More longitudinal research will be necessary. The static nature of questionnaire research does not provide a very full picture of family functioning. Knowledge of the cycle of stress and coping within a family over time could be of use in preparing families to cope better with the difficulties that a handicapped child presents.

4. There may be value in research which begins with the assumption that parents will cope and may even benefit from the experience of having children with mental handicaps. For example, in the present research mothers reported on the CHIP that they were coping by becoming more independent and self-reliant. The struggle to become more independent and self-reliant may have been difficult, but the result was positive. Much of the research on family reactions to their handicapped children has focused on the negative effects of a stressful situation. Understanding of the family may be broadened by this different approach.

5. Since many "parent" programs for families with handicapped children deal almost exclusively with mothers, research is necessary to determine how fathers

can be included and what fathers want in the way of assistance.

Thesis Conclusion

This research study has presented new information on the differences that mothers and fathers report concerning stress, social supports, and coping with their mentally handicapped children. Based on the results, suggestions for professionals working with parents of mentally handicapped children as well as for researchers have been summarized. It is hoped that this research has contributed to a fuller understanding of parental reactions to their handicapped children and that this will lead to improved community services for families with handicapped children.

Table 1
Reliability of the Parenting Stress Index

PSI Scale	Coefficient of Factor Similarity	Alpha[a] Reliabilities		Test-Retest
Total PSI	n/a	.95	.95	.65 to .96[d]
Child Domain	.99	.89	.91	.55 to .82[c]
Adaptability	.87	.66	.72	--[b]
Acceptability	.82	.63	.76	--
Demandingness	.71	.62	.71	--
Mood	.88	.66	.59	--
Distractability/ Hyperactivity	.86	.62	.78	--
Reinforces Parent	.97	.70	.63	--
Parent Domain	.98	.93	.92	.69 to .91[c]
Depression	.84	.80	.78	--
Attachment	.93	.55	.62	--
Restrictions on Role	.99	.79	.79	--
Sense of Competence	.79	.73	.72	--
Social Isolation	.93	.70	.78	--
Relationship with Spouse	.85	.70	.78	--
Parent Health	.88	.66	.57	--

[a]Two sets of alpha reliabilities have been calculated (Abidin, 1986). [b]Double dash indicates that no data is available from the author. [c]Based on four studies listed in the PSI Manual (Abidin, 1986). [d]Based on three studies listed in the PSI Manual (Abidin, 1986).

Table 2
Demographic Information for Participant Parents

Family Code	Father Age	Mother Age	SES Category[a]	Mother Work
01	29	28	III	Parttime
02	34	31	II	Homemaker
03	30	29	II	Fulltime
04	33	31	III	Homemaker
05	29	25	IV	Homemaker
06	36	34	I	Homemaker
07	31	32	I	Parttime
08	33	34	III	Parttime
09	39	36	I	Fulltime
10	39	36	I	Fulltime
11	41	38	II	Homemaker
12	38	33	II	Fulltime
13	30	28	III	Parttime
14	30	28	III	Homemaker
15	36	36	III	Fulltime
16	28	28	II	Parttime

[a]Hollingshead (1975) Categories: I - Major Business, Professional; II - Medium Business, Minor Professional; III - Skilled Craftsmen, Clerical; IV - Semi-skilled.

Table 3
Characteristics of the Sample Children

Family Code	Sex	Chron. Age in Months	Mental Age in Months[a]	Number of Sibs	Etiology of Disability
01	M	54	14	2	Brain damage due to Sudden Infant Death Syndrome
02	F	62	48[b]	2	Down Syndrome
03	F	45	29	2	Unknown
04	M	44	28[c]	1	Hyaline Membrane Disease
05	M	48	08	1	Cornelia de Lange Syndrome
06	F	46	29	2	Apnaxia/Dyspnaxia
07	F	39	21	1	Down Syndrome
08	M	52	30[d]	3	Unknown
09	F	38	15	1	Agenesis of Corpus Collosum Platelets
10	M	42	17	2	Heursbrung Disease
11	M	43	17	1	Autism
12	F	41	09	0	Deaf/Blind
13	F	49	30[d]	0	Cerebral Palsy
14	F	31	20	1	Cornelia de Lange Syndrome
15	M	43	14	2	Autism
16	F	46	12[e]	1	Microcephaly and Cerebral Palsy

[a]Bayley Infant Scales (Bayley, 1969) unless otherwise noted. [b]Leiter Scale (Leiter & Arthur, 1969). [c]Merrill-Palmer Scale of Mental Tests (Stutsman, 1948). [d]Child's mental age exceeded 30 month ceiling measured by the Bayley Infant Scales. [e]Estimated by Child's Psychologist.

Table 4
Parenting Stress Index Scores for Test and Norm Groups

Measure	Test Group[a] Mean	S.D.	Norm Group[b] Mean	S.D.
Total PSI Score:				
Fathers	240.44	37.73	201.60	26.50
Mothers	265.50[c]	51.97	221.10	38.90
Child Domain Total				
Fathers	122.81[c]	27.14	92.90	11.90
Mothers	131.19[c]	30.46	98.40	19.20
Adaptability				
Fathers	29.00	7.39	22.30	2.70
Mothers	30.25	6.84	24.50	5.70
Acceptability				
Fathers	19.94[c]	4.64	10.00	1.90
Mothers	21.56[c]	6.22	12.50	3.60
Demandingness				
Fathers	24.38[c]	6.22	18.40	3.60
Mothers	25.75[c]	7.01	18.10	4.60
Child Mood				
Fathers	11.88	3.52	10.20	1.50
Mothers	11.69	4.92	9.60	2.90
Distractibility				
Fathers	27.44	5.02	21.80	3.20
Mothers	29.75	7.64	24.40	5.00
Child Reinforces Parent				
Fathers	11.50	5.53	10.20	2.30
Mothers	12.19[c]	4.86	9.30	2.90
Parent Domain Total				
Fathers	117.63	17.53	108.70	18.40
Mothers	134.31	32.77	122.70	24.60
Depression				
Fathers	18.50	3.63	17.20	4.60
Mothers	20.18	5.15	20.40	5.60
Attachment				
Fathers	13.50	2.34	11.30	2.10
Mothers	12.63	2.85	12.60	3.10
Role Restriction				
Fathers	17.31	4.41	15.60	5.10
Mothers	20.88	6.28	19.00	5.20
Sense of Competence				
Fathers	29.13	4.33	26.90	5.30
Mothers	30.38	4.94	29.20	6.30
Social Isolation				
Fathers	12.44	3.14	10.40	2.80
Mothers	2.06	3.96	12.80	3.80

(table continues)

Table 4 (continued)

Measure	Test Group[a] Mean	Test Group[a] S.D.	Norm Group[b] Mean	Norm Group[b] S.D.
Spouse				
Fathers	15.50	4.63	15.50	4.90
Mothers	18.19	6.22	16.80	5.10
Health				
Fathers	11.25	2.65	10.90	2.70
Mothers	13.31	3.24	11.90	3.30

Note. Data listed under Norm Group is taken from the Parenting Stress Index - Manual, Second Edition (p. 16) by R. R. Abidin, 1986, Charlottesville, VA: Pediatric Psychology Press.
[a]N = 16 Fathers and 16 Mothers. [b]N = 100 Fathers and 600 Mothers. [c]Scores considered by the author of the PSI (Abidin, 1986) to be "high" scores.

Table 5
Parenting Stress Index Scores for Fathers

Measure	Fathers of Boys[a] Mean	S.D.	Fathers of Girls[b] Mean	S.D.
PSI Total Score	254.00	35.04	229.89	38.24
Child Domain Total	135.29[c]	26.23	113.11	24.96
Adaptability	31.71[c]	8.82	26.89	6.43
Acceptability	21.43[c]	4.43	18.78[c]	4.71
Demandingness	26.86[c]	6.87	22.44	5.25
Child Mood	13.29[c]	2.50	10.78	3.93
Distractibility*	29.86	4.60	25.56	4.72
Child Reinforces Parent	12.14	5.76	11.00	5.64
Parent Domain Total	118.71	17.27	116.78	18.73
Depression	16.86	3.53	19.78	3.35
Attachment	14.00	2.45	13.11	2.32
Role Restriction	17.57	4.24	17.11	4.78
Sense of Competence	30.86	3.44	27.78	4.66
Social Isolation	12.43	3.16	12.44	3.32
Spouse	15.43	4.24	15.56	5.18
Health	11.57	3.55	11.00	1.87

[a]N = 7 Fathers of boys. [b]N = 9 Fathers of girls. [c]Scores considered by the author of the PSI (Abidin, 1986) to be "high" scores.
*$p < .05$, one-tailed t-test.

Table 6
Coping Health Inventory Scores for Test and Norm Groups

Measure	Test Group[a] Mean	Test Group[a] S.D.	Norm Group[b] Mean	Norm Group[b] S.D.
I CHIP - Family Integration				
Fathers	33.31	10.30	36.00	20.00
Mothers	35.31	8.50	40.00	15.00
II CHIP - Social Support				
Fathers	26.13	10.07	25.00	15.00
Mothers	30.56	8.82	28.00	12.00
III CHIP - Medical Situation				
Fathers	10.31	4.51	12.00	8.00
Mothers	14.13	4.44	15.00	7.00

Note. Norm Group data is taken from Family Assessment Inventories for Research and Practice (p. 180) by H. McCubbin, 1987, Madison, WI: University of Wisconsin.
[a]N = 16 Fathers and 16 Mothers. [b]N = 308 Mothers and Fathers.

Table 7
Social Support Inventory Scores for Test and Norm Groups

Kinds of Support	Test Group[a] Mean	S.D.	Norm Group[b] Mean
Emotional			11.49
Fathers	8.13	2.75	
Mothers	9.56	2.10	
Esteem			10.59
Fathers	8.94	2.89	
Mothers	10.13	2.92	
Network			11.18
Fathers	9.31	3.03	
Mothers	9.69	3.20	
Appraisal			9.80
Fathers	5.88	2.13	
Mothers	7.19	2.66	
Altruistic			13.23
Fathers	10.88	3.16	
Mothers	11.63	3.85	
Total Social Support			56.29
Fathers	43.13	12.52	
Mothers	48.19	13.11	
Sources of Support			
Spouse or Partner			7.68
Fathers	8.25	2.67	
Mothers	8.25	2.30	
Children			7.93
Fathers	6.69	1.99	
Mothers	6.88	2.36	
Other Relatives			6.95
Fathers	6.00	1.90	
Mothers	6.88	2.28	
Close Friends			6.68
Fathers	5.00	2.19	
Mothers	7.25	1.98	
Co-workers			2.91
Fathers	5.00	2.42	
Mothers	2.81	2.43	
Church/Synagogue			3.35
Fathers	1.13	2.22	
Mothers	2.69	2.63	

(table continues)

Table 7 (continued)

Sources of Support	Test Group[a] Mean	S.D.	Norm Group[b] Mean
Spiritual Faith			4.85
Fathers	3.69	2.44	
Mother	3.75	2.02	
Community Groups			3.81
Fathers	1.81	1.68	
Mothers	1.50	1.97	
Professionals			3.57
Fathers	2.25	2.11	
Mothers	4.13	1.59	
Special Groups			4.49
Fathers	2.25	2.38	
Mothers	2.56	2.31	
Reading or TV			2.73
Fathers	0.94	1.65	
Mothers	1.50	1.67	
Other			1.365
Fathers	0.13	0.50	
Mothers	0.00	0.00	

Note. Data listed under Norm Group is taken from "Scoring for the Social Support Inventory" by M. M. Rossmann, a one page photocopied sheet available from the author at the University of Minnesota.
[a]N = 16 Fathers and 16 Mothers. [b]N = 118 Parents (standard deviations not provided).Table 8

Table 8
Correlations of Questionnaires

PSI Stress Measure	Coping or Support Measure	r	p
Fathers:			
Child Domain	I CHIP	-.319	.229
	II CHIP	-.399	.126
	III CHIP	.223	.407
	SSI Total	.188	.485
Parent Domain	I CHIP	-.565	.023
	II CHIP	-.322	.223
	III CHIP	-.401	.124
	SSI Total	-.621	.010
Total Score	I CHIP	-.492	.053
	II CHIP	-.437	.091
	III CHIP	-.026	.923
	SSI Total	-.153	.571
Mothers:			
Child Domain	I CHIP	-.537	.032
	II CHIP	.034	.902
	III CHIP	-.080	.768
	SSI Total	-.191	.478
Parent Domain	I CHIP	.004	.988
	II CHIP	.080	.769
	III CHIP	.460	.073
	SSI Total	.244	.362
Total Score	I CHIP	-.312	.239
	II CHIP	.070	.797
	III CHIP	.243	.364
	SSI Total	.042	.877

References

Abbott, D. A., & Meredith, W. H. (1986). Strengths of parents with retarded children. Family Relations, 35, 371-375.

Abidin, R. R. (1986). Parenting Stress Index Manual: Second Edition. Charlottesville, VA: Pediatric Psychology Press.

Astor-Dubin, L., & Hammen, C. (1984). Cognitive versus behavioral coping responses of men and women: A brief report. Cognitive Therapy and Research, 8, 85-90.

Bailey, D. B., & Simeonsson, R. J. (1988). Assessing needs of families with handicapped infants. The Journal of Special Education, 22, 117-127.

Bayley, N. (1969). Bayley Scales of Infant Development. New York: Psychological Corporation.

Beckman, P. J. (1983). Influence of selected child characteristics on stress in families of handicapped infants. American Journal of Mental Deficiency, 88, 150-156.

Beckman-Bell, P. (1981). Child-related stress in families of handicapped children. Topics in Early Childhood Special Education, 1, 45-53.

Belsky, J. (1980). A family analysis of parental influence on infant exploratory competence. In F. A. Pedersen (Ed.), The father-infant relationship: Observational studies in the family setting (pp. 87-110). New York: Praeger.

Bennett, T., & Algozzine, B. (1983). Effects of family-oriented intervention with young handicapped children on indicators of parental stress. Washington, DC: Handicapped Children's Early Education Programs. (ERIC Document Reproduction Service No. ED 276 171)

Benson, H. A., & Turnbull, A. P. (1986). Approaching families from an individualized perspective. In R. H. Horner, L. H. Meyer, and H. D. B. Fredericks (Eds.), Education of learners with severe handicaps: Exemplary service strategies (pp. 127-157). Baltimore: Paul H. Brookes.

Borg, W. R., & Gall, M. D. (1983). Educational research: An introduction (4th Edition). New York: Longman.

Boyd, R. D., Welge, P., Sexton, D., & Miller, J. H. (1989). Concurrent validity of the Battelle Developmental Inventory: Relationship with the Bayley Scales in young children with known or suspected disabilities. Journal of Early Intervention, 13, 14-23.

Bray, N. M., Coleman, J. M., & Bracken, M. B. (1981). Critical events in parenting handicapped children. Journal of the Division for Early Childhood, 3, 26-33.

Bristol, M. M. (1984). Family resources and successful adaptation to autistic children. In E. Schopler & G. B. Mesibov (Eds.), The effects of autism on the family (pp. 289-310). New York: Plenum Press.

Bristol, M. M., & Gallagher, J. J. (1986). Research on fathers of young handicapped children: Evolution, review, and some future directions. In J. J. Gallagher & P. M. Vietze (Eds.), Families of handicapped persons: Research, programs, and policy issues (pp. 81-100). Baltimore: Paul H. Brookes.

Bristol, M. M., & Schopler, E. (1984). A developmental perspective on stress and coping in families of autistic children. In J. Blacher (Ed.), Severely handicapped young children and their famliees: Research in review (pp. 91-141). Orlando, FL: Academic Press.

Burke, L. B. (1973). Coping abilities of parents of moderately retarded children as they relate to the sex of the parent and the age and sex of the child. Dissertation Abstracts International, 34, 1270-1271.

Byrne, E. A., & Cunningham, C. C. (1984). The effects of mentally handicapped children on families--a conceptual review. Journal of Child Psychology and Psychiatry, 26, 847-864.

Cacioppo, B., & Wood, W. D. (1984, August). Personality Measurement in Fathers of Mentally Retarded and Emotionally Disturbed Children. Paper presented at the Annual Convention of the American Psychological Association, Toronto, Ontario. (ERIC Document Reproduction Service No. ED 268 705)

Carney, I. H. (1983). Services for families of severely handicapped preschool students: Assumptions and implications. Journal of the Division for Early Childhood, 7, 78-85.

Chetwynd, J. (1985). Factors contributing to stress on mothers caring for an intellectually handicapped child. British Journal of Social Work, 15, 295-304.

Clarke-Stewart, K. A. (1978). And daddy makes three: The father's impact on mother and young child. Child Development, 49, 466-478.

Clarke-Stewart, K. A. (1980). Cognitive and social development in early childhood. In F. A. Pedersen (Ed.), The father-infant relationship: Observational studies in the family setting (pp. 111-146). New York: Praeger.

Cobb, S. (1982). Social support and health through the life course. In H. I. McCubbin, A. E. Cauble, & J. M. Patterson (Eds.), Family stress, coping, and social support (pp. 189-199). Springfield, IL: Charles C. Thomas.

Collard, R. R. (1972). Bayley Scales of Infant Development. In O. K. Buros (Ed.), The seventh mental measurements yearbook: Volume I (pp. 727-729). Highland Park, NJ: The Gryphon Press.

Cooke, B. D., Rossmann, M. M., McCubbin, H. I., & Patterson, J. M. (1988). Examining the definition and assessment of social support: A resource for individuals and families. Family Relations, 37, 211-216.

Crnic, K. A., Friedrich, W. M., & Greenberg, M. T. (1983). Adaptation of families with mentally retarded children: A model of stress, coping, and family ecology. American Journal of Mental Deficiency, 88, 125-138.

Cummings, S. T. (1976). The impact of the child's deficiency on the father: A study of fathers of mentally retarded and of chronically ill children. American Journal of Orthopsychiatry, 46, 246-255.

Damarin, F. (1978). Bayley Scales of Infant Development. In O. K. Buros (Ed.), The eighth mental measurements yearbook: Volume I (pp. 291-293). Highland Park, NJ: The Gryphon Press.

Donovan, A. M. (1988). Family stress and ways of coping with adolescents who have handicaps: Maternal perspectives. American Journal on Mental Retardation, 92, 502-509.

Dubose, R. F. (1976). Predictive value of infant intelligence scales with multiply handicapped children. American Journal of Mental Deficiency, 81, 388-390.

Dunlap, W. R., & Hollinsworth, J. S. (1977). How does a handicapped child affect the family? Implications for practitioners. The Family Coordinator, 26, 286-293.

Dunst, C. J., Leet, H. E., & Trivette, C. M. (1988). Family resources, personal well-being, and early intervention. The Journal of Special Education, 22, 108-116.

Dunst, C. J., & Trivette, C. M. (in press). A family systems model of early intervention with handicapped and developmentally at-risk children. In D. P. Powell (Ed.), Parent education and support programs: Consequences for children and families. Norwood, NJ: Ablex Publishing Corporation.

Dunst, C. J., Trivette, C. M., & Cross, A. H. (1986). Mediating influences of social support: Personal, family, and child outcomes. American Journal of Mental Deficiency, 90, 403-417.

Dyson, L., & Fewell, R. R. (1986). Stress and adaptation in parents of young handicapped and nonhandicapped children: A comparative study. Journal of the Division for Early Childhood, 10, 25-34.

Easterbrooks, M. A., & Goldberg, W. A. (1984). Toddler development in the family: Impact of father involvement and parenting characteristics. Child Development, 55, 740-752.

Erickson, M. T., Johnson, N. M., & Campbell, F. A. (1970). Relationships among scores on infant tests for children with developmental problems. American Journal of Mental Deficiency, 75, 102-104.

Faran, D. C., Metzger, J., & Sparling, J. (1986). Immediate and continuing adaptations in parents of handicapped children: A model and an illustration. In J. J. Gallagher & P. M. Vietze (Eds.), Families of handicapped persons: Research, programs, and policy issues (pp. 143-166). Baltimore, MD: Paul H. Brookes.

Fotheringham, J. B., Skelton, M., & Hoddinott, B. A. (1972). The effects on the family of the presence of a mentally retarded child. Canadian Psychiatric Association Journal, 17, 283-290.

Friedrich, W. N., & Friedrich, W. L. (1981). Psychosocial assets of parents of handicapped and nonhandicapped children. American Journal of Mental Deficiency, 85, 551-553.

Gallagher, J. J., Beckman, P., & Cross, A. H. (1983). Families of handicapped children: Sources of stress and its amelioration. Exceptional Children, 50, 10-19.

Gallagher, J. J., Cross, A., & Scharfman, W. (1981). Parental adaptations to a young handicapped child: The father's role. Journal of the Division for Early Childhood, 3, 3-14.

Gallagher, J. J., Scharfman, W., & Bristol, M. (1984). The division of responsibilities in families with preschool handicapped and nonhandicapped children. Journal of the Division for Early Childhood, 8, 3-11.

Goldberg, S., Marcovitch, S., MacGregor, D., & Lojkasek, M. (1986). Family responses to developmentally delayed preschoolers: Etiology and the father's role. American Journal of Mental Deficiency, 90, 610-617.

Gould J. (1975). The use of the Vineland Social Maturity Scale, the Merill-Palmer Scale of Mental Tests (non-verbal items) and the Reynell Developmental Language Scales with children in contact with the services for severe mental retardation. Journal of Mental Deficiency Research, 21, 213-226.

Gumz, E. J., & Gubrium, J. F. (1972). Comparative parental perceptions of a mentally retarded child. American Journal of Mental Deficiency, 77, 175-180.

Hoffman, L. W. (1983). Increased fathering: Effects on the mother. In M. E. Lamb & A. Sagi (Eds.), Fatherhood and family policy (pp. 167-190). Hillsdale, NJ: Lawrence Erlbaum Associates.

Hollingshead, A. B. (1975). Four factor index of social status. New Haven, CT: Department of Sociology, Yale University.

Holroyd, J., & McArthur, D. (1976). Mental retardation and stress on the parents: A contrast between Down's Syndrome and childhood autism. American Journal of Mental Deficiency, 80, 431-436.

Kazak, A. E., & Clark, M. W. (1986). Stress in families of children with myelomeningocele. Developmental Medicine & Child Neurology, 28, 220-228.

Kazak, A. E., & Marvin, R. S. (1984). Differences, difficulties and adaptation: Stress and social networks in families with a handicapped child. Family Relations, 33, 67-77.

Krauss, M. W. (1990). New Precedent in Family Policy: Individualized Family Service Plan. Exceptional Children, 56, 388-395.

LaFiosca, T., & Loyd, B. H. (1986). Defensiveness and the assessment of parental stress and anxiety. Journal of Clinical Psychology, 15, 254-259.

Lamb, M. E., Pleck, J. H., & Levine, J. A. (1986). Effects of increased paternal involvement on children in two-parent families. In R. A. Lewis & R. E. Salt (Eds.), Men in families (pp. 141-158). Beverly Hills: Sage Publications.

Leiter, R., & Arthur, G. (1969). Leiter International Performance Scale and the Arthur Adaptation. Chicago, IL: C. H. Stoelting.

Linder, T. W., & Chitwood, D. G. (1984). The needs of fathers of young handicapped children. Journal of the Division for Early Childhood, 8, 133-139.

Loeb, H. W. (1985). Merrill-Palmer Scale. In D. J. Keyser, & R. C. Sweetland (Eds.), Test Critiques: Volume II (pp. 457-462). Kansas City, MO: Test Corporation of America.

Matey, C. (1984). Leiter Internaltional Performance Scale. In D. J. Keyser & R. C. Sweetland (Eds.), Test Critiques: Volume I (pp. 411-420). Kansas City, MO: Test Corporation of America.

McCubbin, H. (1987). Family Assessment Inventories for Research and Practice. Madison, WI: Family Stress, Coping, and Health Project, University of Wisconsin-Madison.

McCubbin, H. I., Joy, C. B., Cauble, A. E., Comeau, J. K., Patterson, J. M., & Needle, R. H. (1980). Family stress and coping: A decade review. Journal of Marriage and the Family, 42, 855-871.

McCubbin, H. I., McCubbin, M., Nevin, R. S., & Cauble, E. (1983). Coping Health Inventory for Parents. Madison, WI: Family Stress Coping and Health Project, University of Wisconsin--Madison.

McCubbin H. I., & Patterson, J. M. (1981). Systematic assessment of family stress, resources, & coping: Tools for research, education, and clinical intervention. St. Paul, MN: Family Stress & Coping Project.

McCubbin, H., Patterson, J., Rossman, M., & Cooke, B. (1982). Social Support Inventory. Madison, WI: Family Stress Coping and Health Project, University of Wisconsin--Madison.

McKinney, B., & Peterson, R. A. (1984). Parenting Stress Index. In D. J. Keyser & R. C. Sweetland (Eds.) Test Critiques, Volume I (pp. 504-510). Kansas City, MO: Test Corporation of America.

McKinney, B., & Peterson, R. A. (1984). Parenting Stress Index. In D. J. Keyser & R. C. Sweetland (Eds.), Test Critiques, Volume I (pp. 504-510). Kansas City, MO: Test Corporation of America.

McKinney, B., & Peterson, R. A. (1987). Predictors of stress in parents of developmentally disabled children. Journal of Pediatric Psychology, 12, 133-150.

Minnes, P. M. (1988). Family resources and stress associated with having a mentally retarded child. American Journal on Mental Retardation, 93, 184-192.

Moos, R. (1974). Family Environment Scales. Palo Alto, CA: Consulting Psychology Press.

Mott, S. E., Fewell, R. R., Lewis, M., Meisel, S. J., Shonkoff, J. P., & Simeonsson, R. J. (1986). Methods for assessing child and family outcomes in early childhood special education programs: Some views from the field. Topics in Early Childhood Special Education, 6, 1-15.

Naglieri, J. A. (1981). Extrapolated developmental indices for the Bayley Scales of Infant Development. American Journal of Mental Deficiency, 85, 548-550.

Newborg, J., Stock, J., Wnek, L., Guidubaldi, J., & Svinicki, J. (1984). Battelle Developmental Inventory: Examiner's Manual. Dallas: DLM/Teaching Resources.

Parke, R. D. (1981). Fathering. Glasgow: Fontana Paperbacks.

Parke, R. D. (1986). Fathers, families, and support systems: Their role in the development of at-risk and retarded infants and children. In J. J. Gallagher & P. M. Vietze (Eds.), Families of handicapped persons: Research, programs, and policy issues (pp. 101-113). Baltimore: Paul H. Brookes.

Parke, R. D., & Sawin, D. B. (1980). The family in early infancy: Social interactional and attitudinal analyses. In F. A. Pedersen (Ed.), The infant-father relationship (pp. 44-70). New York: Praeger Press.

Petersen, P. (1984). Effects of moderator variables in reducing stress outcome in mothers of children with handicaps. Journal of Pychosomatic Research, 28, 337-344.

Price-Bonham, S., & Addison, S. (1978). Families and mentally retarded children: Emphasis on the father. The Family Coordinator, 27, 221-230.

Radin, N. (1981). The role of the father in cognitive, academic, and intellectual development. In M. E. Lamb (Ed.), The role of the father in child development (pp. 379-427). New York: John Wiley & Sons.

Radin, N., & Russell, G. (1983). Increased father participation and child development outcomes. In M. E. Lamb & A. Sagi (Eds.), Fatherhood and family policy (pp. 191-218). Hillsdale, NJ: Lawrence Erlbaum Associates.

Russell, G. (1983). The changing role of fathers. Milton Keynes, England: Open University Press.

Russell, G., & Radin, N. (1983). Increased paternal particiaption: The father's perspective. In M. E. Lamb & A. Sagi (Eds.), Fatherhood and family policy (pp. 139-165). Hillsdale, NJ: Lawrence J. Erlbaum Associates.

Rutter, M., Tizard, J., & Whitmore, K. (1970). Education, Health and Behavior. London: Longmans.

Sagi, A. (1982). Antecedents and consequences of various degrees of paternal involvement in child rearing: The Israeli project. In M. E. Lamb (Ed.), Nontraditional families: Parenting and child development (pp. 205-232). Hillsdale, NJ: Lawrence Erlbaum Associates.

Salisbury, C. L. (1987). Stressors of parents with young handicapped and nonhandicapped children. Journal of the Division for Early Childhood, 11, 154-160.

Sarason, I. G., Johnson, J. H., & Siegel, J. M. (1978). Assessing the impact of life changes: Development of the Life Experiences Survey. Journal of Consulting and Clinical Psychology, 46, 932-946.

Schilling, R. F., & Schinke, S. P. (1984). Personal coping and social support for parents of handicapped children. Children and Youth Services Review, 6, 195-206.

Schilling, R. F., Schinke, S. P., & Kirkham, M. A. (1985). Coping with a handicapped child: Differences between mothers and fathers. Social Science and Medicine, 21, 857-863.

Siegel, L. S. (1981). Infant tests as predictors of cognitive and language development at two years. Child Development, 52, 545-557.

Singer, G. H. S., Irvin, L. K., Irvine, B., Hawkins, N., & Cooley, E. (1989). Evaluation of community-based support services for families of persons with developmental disabilities. The Journal of the Association for Persons with Severe Handicaps, 4, 312-323.

Snow, M. E., Jacklin, C. N., & Maccoby, E. E. (1983). Sex-of-child differences in father-child interaction at one year of age. Child Development, 54, 227-232.

Stokes, J. P., & Wilson, D. G. (1984). The inventory of socially supportive behaviors: Dimensionality, prediction, and gender differences. American Journal of Community Psychology, 12, 53-68.

Stoneman, Z., & Brody, G. H. (1984). Research with families of severely handicapped children: Theoretical and methodological considerations. In J. Blacher (Ed.), Severely handicapped young children and their famlies: Research in review (pp. 179-214). Orlando, FL: Academic Press.

Stutsman, R. (1931). Merrill-Palmer Scale. Chicago, IL: Stoelting Company.

Suelzle, M., & Keenan, V. (1981). Changes in family support networks over the life cycle of mentally retarded persons. American Journal of Mental Deficiency, 86, 267-274.

Tallman, I. (1965). Spousal role differentiation and the socialization of severely retarded children. Journal of Marriage and the Family, 27, 37-42.

Tulloch, D. (1983). Why me? Parental reactions to the birth of an exceptional child. Journal of the Division for Early Childhood, 7, 54-60.

Tynan, D. D., & Fritsch, R. E. (1987). Stress asociated with handicapped children: Guidelines for family management. (ERIC Document Reproduction Service No. ED 285 314)

Vadasy, P. F., Fewell, R. R., Meyer, D. J., Schell, G., & Greenberg, M. T. (1984). Involved parents: Characteristics and resources of fathers and mothers of young handicapped children. Journal of the Division for Early Childhood, 8, 13-25.

VanderVeer, B., & Schweid, E. (1974). Infant assessment: Stability of mental functioning in young retarded children. American Journal of Mental Deficiency, 79, 1-4.

Waisbren, S. E. (1980). Parents' reactions after the birth of a developmentally disabled child. American Journal of Mental Deficiency, 84, 345-351.

Washington, V., & Gallagher, J. J. (1986). Family Roles, Preschool Handicapped Children, and Social Policy. In J. J. Gallagher & P. M. Vietze (Eds.), Families of Handicapped Persons: Research, Programs, and Policy Issues (pp. 261-272). Baltimore, MD: Paul H. Brookes.

Whiteley, J. H., & Krenn, M. J. (1986). Uses of the Bayley Mental Scale with nonambulatory profoundly mentally retarded children. American Journal of Mental Deficiency, 90, 425-431.

Wikler, L. (1981). Chronic stresses of families of mentally retarded children. Family Relations, 30, 281-288.

Wikler, L. M. (1986). Periodic stresses of familes of older mentally retarded children: An exploratory study. American Journal of Mental Deficiency, 90, 703-706.

Wilkinson, L. (1989). Systat: The system for statistics. Evanston, IL: Systat, Incorporated.

Wishart, M. C., Bidder, R. T., & Gray, O. P. (1981). Parents' report of family life with a developmentally delayed child. Child: Care, Health, and Development, 7, 267-279.

Zeitlin, S., & Williamson, G. G. (1988). Developing family resources for adaptive coping. Journal of the Division for Early Childhood, 12, 137-146.

Appendix
Letter to Parents and Consent Form

December 4, 1986

Dear Parents:

As you know so well, over the past several years a variety of programs and services have developed to provide support to families with young children having special needs or handicaps. We have been actively involved in these services ourselves and would like to learn more about families' experiences with these intervention programs in order to aid in their improvement.

In particular, it is felt that early intervention programs are helping families cope with their child's special needs and the stresses and strains involved in meeting these special needs. At this time, we would like to learn more about how families cope with these issues; as well, we would like to learn more about which aspects of early intervention programs are helpful in your efforts to meet your child's needs.

We initiated a research project in which we will study the support families receive from programs, as well as the stress famlies are experiencing from raising their child with special needs or handicaps. Since every child and her/his family have special unique characteristics, we would like to learn more about these characteristics and the support networks (professional and personal) which are available to you.

Thus, we are asking for your particiaption in this research study in which we will look at several specific child, family, and program vairables or issues. Particiapation, of course, is completely voluntary; as well, you would be free to cease participating, should you agree to work with us, at any time during this study. The activities involved in this research project would include the following contacts between ourselves and our research team and you and your family.

In learning more about the ways in which your family copes with your child's special needs, we would like to conduct an interview in your home, which would last about

forty-five minutes to one hour. As well, we would leave with you some questionnaires to complete which would be collected at a later date by a member of our research team. These questionnaires would also take approximately an hour.

We would like to complete an assessment of your child's developmental status which would be done by a member of the research team in your home, again lasting about forty-five minutes to one hour. Finally, we would like to video-tape a brief set of play interactions between yourselves and your child. This would be done at the University, if possible, and if not, we can carry this out in your home. This activity would last about thirty minutes. Thus, we would be seeking about three and a half to four hours of your time over a two to three week period.

As mentioned previously, you would be free to withdraw at any time in the research activities. All of the data and information obtained in this project would be confidential. Your names would not be placed on any measures, thus ensuring anonymity and confidentiality. The questionnaires would be completed anonymously and would not be summarized in an individual way. All data would be put together and dealt with by program type and in large groups of participants.

We envision this as the first of several steps in a research project working with your intervention programs and the staff of these programs. In the next phase, we would like to look at parent support services and special parent intervention techniques as two additional components which may be added to early intervention programs to asist you in coping with your child's special needs. Prior to proceeding on to that study, however, we would share with you at a parent meeting the general results of this project and where we wish to go in the future. Since we will have an opportunity to receive individual feedback from you and the group feedback at the time of the partent meeting, we would appreciate and value your honest evaluation and feedback regarding various features of this study throughout our contacts with you.

We plan to begin our work with families in the new year. Your participation and cooperation on this project would be greatly appreciated and will assist us in developing

more sensitive and individualized early intervention programs for famlies in our community.

If at any time, you have concerns about the project activities, please call either of us or the director of your program.

Thankyou for the time you have taken to read this letter and we look forward to your participation in this project. Should you wish to participate, we would be pleased to explain the details of each aspect of this project to you in person. At that time, you would also have an opportunity to cease your particiaption. We look forward to working with you and hope you experience a pleasant and enjoyable holiday season.

Sincerely yours,

Gerard M. Kysela, Ph. D.,

Linda McDonald, Ph. D.

(Please cut here and return to address below)

I/We _____ would like to participate in this research project, "Coping and Stress in Families with Handicapped Children." We would like to participate in the first meeting and make our final decision following that information sharing session. Phone _____.

Dr. G. M. Kysela
Educational Psychology
The University of Alberta
Edmonton, Alberta, T6G 2G5